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INDEX TO ARTICLES IN VOLUME XXI
BY AUTHORS

- Abbott, Clinton G., Secretary, Report of, 445.
Aitkenhead, Paul, see Fisher, M. L.
Alexander, Jane Barbara, Poem by, 138.
Alexander, Robert, L. Y. Lancaster, and Gordon Wilson, Christmas Census, 44.
Allatt, Frank, and Alec Ross, Christmas Census, 33.
Allen, Arthur A., When the North Wind Blows, I; The Warblers of Central New York, I, 81; II, 149; Photograph by, 198; Editorial by, 379; Annual Report, 433.
Allen, Francis H., The Present Scarcity of Golden-crowned Kinglets, 361.
Allen, Glover M., Boston Region, 50, 112, 182, 247.
Allen, Mary Pierson, Christmas Census, 34.
Anderson, N. M., Secretary, Report of, 438.
Atwell, George C., Secretary, Report of, 428.
Avery, Carlos, and J. M. Eheim, Christmas Census, 42.
Axtell, Harold H., Christmas Census, 31.
Ayres, Douglas, Jr., Christmas Census, 31.

Bade, Dr. E., How Birds Can Take Their Own Pictures, 342.
Bagg, John L., and Aaron C., see Healey, Alden.
Bailey, Mary L., Sioux City Bird Club Notes, 128.
Bailey, Mrs. H. M., see Marshall, Mrs. F. W.
Ballard, Foster, John Austin Kerr, and Jenckes Mason, Christmas Census, 43.
Barnes, Emily, Isabel Clay, and S. Wooten, Christmas Census, 44.
Barton, R. A., see Keep, O. D.
Bates, Gardner, Christmas Census, 41.
Battell, F. L., From Ames, Iowa, 303.
Beck, Herbert, Hummingbird Photography, 304.
Beck, Herbert H., Abraham Beck Miller, and Charles S. Bricker, Christmas Census, 37.
Beck, H. H., and V. E. Dippell, Photographs by, 304.
Beckwith, Helen C., Annual Report, 438.
Beebe, Ralph, Christmas Census, 40.
Beers, Mrs. H. P., Secretary, Report of, 443.
Bellinger, H. C., Photograph by, 334.
Bergtold, W. H., Christmas Census, 46; Denver Region, 54, 116, 187, 252, 369.
Bicknell, E. P., Christmas Census, 32.
Bicknell, Mrs. F. T., Letter from, 77; Photographs by, 439, 440.
Blake, Isabel, Eave Swallows Nesting on a Painted Building, 104.
Blanchard, George G., Christmas Census, 26.
Blodget, George L., Christmas Census, 26.
Blomberger, Helen A., Secretary, Report of, 431.
Botsford, Barton and Nelson, see Keep, C. D.
Bourne, Thomas L., see Morey, George W.
Bowdish, Beecher S., Secretary, Report of, 429.
Bowers, Elizabeth, October in Chicago, 391.
Bowes, Mabel L. C., A Robin's Lament, 244.
Brewster, W. L., and D. K. Strong, Christmas Census, 47.
Bricker, Charles S., see Beck, Herbert H.
Bridge, Edmund, and Lidian E., Christmas Census, 27.
Bridge, Lidian E., see Jump, Alice O.

Brooks, Allan, Christmas Census from Belgium, 103.
Brown, Genevieve, Finding Birds' Nests, 194.
Brown, Roy M., Christmas Census, 39.
Bruen, Frank, see Smith, Elbert E.
Bryant, Harold C., Unusual Occurrence in the San Francisco Bay Region, 238.
Burleigh, Thomas D., Christmas Census, 49.
Burnham, Stewart H., Bird Notes from the Lake George Region, 301.
Burroughs, Elizabeth, Secretary, Report of, 433.
Burtch, Verdi, A Winter Feeding-place for Birds, 351.
Button, Lily Ruegg, Christmas Census, 46.

Camara, Mary, A Rare Pet, 387.
Campbell, A. L., and Mamie, see Patton, Frank.
Cannon, Gabriel, and George S. Snowden, Jr., Christmas Census, 39.
Carlson, A., Christmas Census, 42.
Carter, Ellen C., see Linton, M. Albert.
Case, Clifford M., Christmas Census, 29.
Caskey, R. C., Christmas Census, 34.
Chapman, Frank M., Notes from a Traveler in the Tropics: II, Cuba to Panama, 11; III, From Panama to Peru, 87; IV, Peru, 157; V, Chile, 333; Notes on the Plumage of North American Birds, 24, 102, 172, 355; Nature and England, 215; The Study of Bird-Life in the Schools of New Jersey, 257; Editorials by, 256, 378; William Brewster, Obituary, 277; Reviews by 254, 372, 374, 375, 376; Photographs by, 280, 283, 285.
Chase, Richard M., Christmas Census, 31.
Childs, Helen P., Secretary, Report of, 423.
Clay, Isabel, see Barnes, Emily.
Clement, Myron, see Hallock, Bessie A.
Coffin, Mrs. Francis Hopkin, President, Annual Report, 446.
Coker, Robert E., Photographs by, 88, 373.
Coleman, Delbert, Christmas Census, 40.
Compton, Mrs. C. N., President, Annual Report, 447.
Crane, Bessie L., American Egret in Connecticut, 360.
Crane, Mrs. G. H., Annual Report, 439.
Crawford, Elis, Francis Rawsum, Carl and Edward McAndrews, Mary Belle Johnston, and I. H. Johnston, Christmas Census, 38.
Crecelius, Alice, Summer, Fall and Winter Observations in the West, 67.
Crosby, Maunsell S., Christmas Census, 31.
Curry, Haskell B., see Perine, Keble.

Dadisman, A. J., Christmas Census, 39; Ruffed Grouse Scarce in West Virginia, 77; Prairie Horned Lark, 181.
Daly, E., see Watson, C. G.
Danforth, R. E., Christmas Census, 35.
Danforth, Stuart T., Christmas Census, 35.
Danner, May S., and Mary King, Christmas Census, 42.
Davis, Edwin Russell, Christmas Census, 27.
DeBoos, Esther, Robin's Nest on a Wren-house, 103.

- Deghuee, Marion, Secretary, Report of, 437.
 Denker, Wm. A., see Perine, Keble.
 Dent, Paul, see Jokerst, Dent.
 Dinsmore, Susan B., Robin Redbreast, War Gardener, 192.
 Dippell, V. E., see Beck, H. H.
 Doll, Caroline L., Buffalo Audubon Society, 137.
 Doolittle, E. A., Food of Young Purple Martins, 305; An Old Squaw Joker, 306.
 Downhour, Elizabeth, Secretary, Report of, 427.
 Dreier, Theodore, Christmas Census, 33.
 Dunbar, Lula, and Robert, Jr., Christmas Census, 41.
 Dwight, Jonathan, M.D., Review by, 189.
 Dyche, Grace L. S., The Nesting of Robins, 243.
 Eastman, Sarah Chandler, The Cape May Warbler in Southern Maine, 180.
 Eaton, E. H., see Grant, W. W.
 Eaton, Warren F., Christmas Census, 27.
 Edson, Wm. L. G., and R. E. Horsey, Christmas Census, 31.
 Eheim, J. M., see Avery, Carlos.
 Ehinger, C. E., Christmas Census, 37.
 Eifrig, C. W. G., and Chreswell J. Hunt, Christmas Census, 43.
 Ekblaw, Sergeant George E., and Alfred Nordstrom, Christmas Census, 35.
 Ekblaw, Sidney E., and W. Elmer, Christmas Census, 43.
 Elliot, Sarah J., Secretary, Report of, 448.
 Elwood, Russell, My Experience with Birds, 263.
 Emmons, E. T., see Grant, W. W.
 Eno, Henry Lane, Christmas Census, 35.
 Evans, William Bacon, see Linton, M. Albert.
 Fabens, M. E., Interlopers, 304.
 Farley, John A., Breeding of the Myrtle Warbler at Webster, Mass., 306.
 Farquhar, Arthur, see Weiser, Charles S.
 Farrar, C. D., and L. E., Christmas Census, 26.
 Fay, Frank S., President, Annual Report, 441.
 Fearing, Albert, The Black and White Warbler, 193.
 Finley, Irene, Photograph by, 412.
 Finley, William L., Field Agent, Report of, 412; Photograph by, 414.
 Fisher, M. L., and Paul Aitkenhead, 43.
 Fisher, Mr. and Mrs. G. Clyde, Ruth Anna, and Farida A. Wiley, Christmas Census, 32.
 Forbush, Edward Howe, Field Agent, Report of, 408.
 Ford, E. R., Robins Enjoy Flat Life, 103.
 Ford, Lee M., Christmas Census, 46.
 Ford, Louise P., and Marrior I. Pellew, Christmas Census, 43.
 Fordyce, Geo. L., C. A. Leedy, W. H. Warner, and H. W. Weiserber, Christmas Census, 43.
 Foster, Charles I., Secretary, Report of, 450.
 Fuertes, Louis Agassiz, Colored plates by, facing, 1, 81, 149, 333; Drawings by, 12, 14, 159, 163, 164, 339.
 Gabriel, Geo. H., Mockingbird in Connecticut, 243.
 Ganier, A. F., Christmas Census, 45.
 Gasser, Mrs. G. W., From Near the Arctic Circle, 359.
 Geiniene, Fred, see Vincent, Ralph.
 Gooch, John H., Christmas Census, 43.
 Goodsell, William, Helping Barn and Cliff Swallows to Nest, 175.
 Gordon, Swale, see Monroe, Burt.
 Gormley, Liguori, see Macnamare, Charles.
 Grant, W. W., Otto McCreary, E. T. Emmons, Mrs. H. H. Henderson, and E. H. Eaton, Christmas Census, 31.
 Graves, Francis M., Christmas Census, 29.
 Graves, Maude A., and Bessie M., Christmas Census, 28.
 Green, Margaret S., Secretary, Report of, 445.
 Grimminger, Chas. and Edgar, see McGraw, Harry A.
 Griscom, Ludlow, Christmas Census from France, 49; review by, 254.
 Griswold, Geo. T., Christmas Census, 29.
 Gutman, Joe, see Vincent, Ralph.
 Hallett, George H., Jr., see Linton, M. Albert.
 Hallinan, Frances Redfield, My First Experience with a Redstart, 386.
 Hallock, Bessie A., and Myron Clement, Christmas Census, 31.
 Hamson, Blanche, see Sadler, Nettie M.
 Handley, Charles O., and Harry E., Christmas Census, 38.
 Hannum, W. E., Christmas Census, 36.
 Hansen, Harold E., see Vincent, Ralph.
 Harper, Francis, and Remington Kellogg, Christmas Census, 49.
 Harris, Harry, Kansas City Region, 54, 115, 186, 252, 369; see Michaels, W. C.
 Haskin, Leslie L., Christmas Census, 47; Townsend's Solitaire, 242.
 Hathaway, Harry S., Christmas Census, 28.
 Haven, Herbert M. W., Annual Report, 436.
 Haworth, George D., Christmas Census, 42.
 Hays, see McGraw, Harry A.
 Heacock, Esther, Secretary, Report of, 452.
 Healey, Alden, John L. Bagg, and Aaron C. Bagg, Christmas Census, 27.
 Heiser, J. M., Bird-Nesting in Texas, 110.
 Hempel, Kathleen M., Notes on Nesting Bluebirds and House Wrens, 173.
 Henderson, Mrs. H. H., see Grant, W. W.
 Herschler, Irene M., Cardinals and Wrens, 246.
 Hix, George E., Clark L. Lewis, Edward G. Nichols, and L. Nelson Nichols, Christmas Census, 32.
 Hodgson, F. H., Two Interesting Observations, 299.
 Holden, Edith S., The A. B. C., 264.
 Holland, E. W., A List of Virginia Birds, 194.
 Homan, Dr. R. W., Photograph by, 10.
 Horsey, R. E., see Edson, Wm. L. G.
 Horsfall, R. Bruce, Colored plate by, facing 198.
 Houghton, Clarence, Christmas Census, 30.
 Hoyt, Gertrude, Starlings Spreading in New York State, 240.
 Humphrey, Helen, Secretary, Report of, 453.
 Hunt, Chreswell J., see Eifrig, C. W. G.
 Hunt, Emily G., M.D., Annual Report, 444.
 Hurd, Frances A., School Agent, Report of, 418.
 Irwin, J. L., see Vincent, Ralph.
 Jack, C. W., Secretary, Report of, 435.
 Jenness, Perley M., The Birds of Coblentz, 290.
 Job, Herbert K., Annual Report, 414.
 Johnson, Charles E., Harris's Sparrow at Lawrence, Kans., 360.
 Johnson, Elizabeth H., Winter Feeding of Birds, 70.
 Johnston, Mary Belle, and I. H., see Crawford, Elis.
 Jokerst, Dent, and Paul Dent, Christmas Census, 45.
 Jones, Henrietta O., Secretary, Report of, 444.

- Jones, Lynds, Oberlin Region, 53, 114, 185.
 Judd, Therese, The Ruby-crowned Kinglet, 106.
 Jump, Alice O., and Lidian E. Bridge, Christmas Census, 27.
- Keep, C. D., R. A. Barton, and Nelson Botsford, Christmas Census, 34.
 Kellogg, Clinton E., Making Friends with the Golden-winged Warbler, 241.
 Kellogg, Remington, see Harper, Francis.
 Kelly, Berners B., Christmas Census, 46.
 Kerr, John Austin, see Ballard, Foster.
 Kimes, Edw. D., Christmas Census, 42.
 Kinch, Harry B., see McGraw, Harry A.
 King, Mary, see Danner, May S.
 Kryss, Rosa, Home Observations, 68.
- LaDue, Harry Jay, Christmas Census, 41; U-Boat Methods in Nature, 358.
 Lancaster, L. Y., see Alexander, Robert.
 Langdon, Roy M., Secretary, Report of, 424.
 Larrabee, Austin P., and Philo J., Christmas Census, 46.
 Larson, Adrian, Christmas Census, 46.
 Lastreto, C. B., Audubon Association of the Pacific, 136.
 Latham, Roy, Christmas Census, 33.
 Lawrence, Jos. S., Christmas Census, 30.
 Leedy, C. A., and Fordyce, Geo. L.
 Leister, C. W., Photographs by, 91, 197, 233; The Spotted Sandpiper, 287.
 LePerrier, Gabrielle, A Pet Robin, 389.
 Lewis, Clark L., see Hix, George E.
 Lewis, Dora Worster, The Deserted Home, 104.
 Lewis, Harrison F., Christmas Census, 25.
 Lewis, J. H., Photograph by, 250.
 Lewis, Norman, Studying Birds in Maine and Nova Scotia, 258.
 Linton, M. Albert, Anna A. Mickle, Samuel N. Rhoads, Ellen C. Carter, William Bacon Evans, and George H. Hallett, Jr., Christmas Census, 36.
 Lippincott, Joseph W., An Evening with Birds in Florida, 16.
 Lofstrom, Lawrence L., Pelagic Habits of Kittiwake Gulls in Winter, 181.
 Lowerre, E. M., Red-headed Woodpecker Nesting on Long Island, 303.
 Lownes, Albert E., An Unusual Nesting-site, 363.
 Lundwall, Nelson, Christmas Census, 46.
- Macnamara, Charles, and Liguori Gormley, Christmas Census, 25.
 Madison, H. L., Secretary, Report of, 430.
 Magee, M. J., Notes from Sault Ste. Marie, 237.
 Mainster, R. W., Christmas Census, 38.
 Marckres, Geo. M., Nuthatch Acrobats, 360.
 Marshall, Mrs. F. W., Josephine Smith, and Mrs. H. H. Bailey, Christmas Census, 44.
 Mason, Jenckes, see Ballard, Foster.
 McAndrews, Carl and Edward, see Crawford, Elis.
 McAtee, W. L., Alexander Wetmore, and Edward A. Preble, Christmas Census, 30.
 McCamant, Tom, The Western Robin, 131.
 McConnell, Harry B., John Worley, and Raymond Timmons, Christmas Census, 142.
 McConnell, Thos. L., and L. F. Savage, Christmas Census, 37; Prothonotary Warbler at Erie, Pa., 242.
 McCreary, Otto, see Grant, W. W.
 McGraw, Harry A., Harry B. Kinch, Harry P. Hays, Ira J. Stouffer, Chas. Grimminger, and Edgar Grimminger, Christmas Census, 37.
- McIlwraith Ornithological Club, Christmas Census, 26.
 McLeod, J. R., see Watson, C. G.
 Mengel, Mr. and Mrs. G. Henry, Christmas Census, 36.
 Metcalf, E. L., Is the House Wren a Bigamist? 303.
 Michaels, W. C. and Son, A. E. Shirling, and Harry Harris, Christmas Census, 45.
 Mickle, Anna, see Linton, M. Albert.
 Middleton, Mr. and Mrs. J. C., see Watson, C. G.
 Miller, Abraham Beck, see Beck, Herbert H.
 Miller, Ada, Successful School Observation Conditions, 130.
 Miller, W. DeW., Christmas Census, 34.
 Miner, Mr. and Mrs. Leo D., Hon. Edmund Platt, M. C. and Raymond W. Moore, Christmas Census, 38.
 Minor, O. B., A Bird-House Contest, 65.
 Monroe, Burt, and Swale Gordon, Christmas Census, 44.
 Moore, Raymond W., see Miner, Leo D.
 Morey, George W., and Thomas L. Bourne, Christmas Census, 31.
 Morgan, Griscom, Note from a Young Contributor, 265.
 Morgan, May, Christmas Census, 41.
 Morgan, Olga Marie, A Brood of Young Robins, 362.
 Mosk, Sanford, see Vincent, Ralph.
 Moyer, Albert, Another Wire Wren-nest, 181.
 Munger, Edwin T., Christmas Census, 29.
 Munroe, Mrs. Kirk, President, Annual Report, 434.
 Myers, Harriet Williams, Secretary, Report of, 421.
- Neff, Johnson, Christmas Census, 45.
 Nichols, Edward G., see Hix, George E.
 Nichols, John Treadwell, New York Region, 51, 112, 183, 248, 308, 364; Editorials by, 57, 119, 191; Reviews by, 55, 56, 117, 118, 188, 189, 255, 371, 376; Bird-Lore's Twentieth Christmas Census, 351.
 Nichols, Nelson, see Hix, George E.
 Noble, G. K., Unusual Breeding-site of Killdeer Plover, 173.
 Norak, Frank, Christmas Census, 29.
 Nordstrom, Alfred, see Ekblaw, Sergeant George E.
 Norman, Harold, Christmas Census, 40.
 Norton, Arthur H., Field Agent, Report of, 417.
 Nott, Grace B., Secretary, Report of, 449.
- Oberholser, Harry C., The Migration of North American Birds, 23, 100, 170, 354; Washington Region, 52, 114, 184, 250, 310, 366; Another Purple Martin Roost in the City of Washington, 96; A Surprised Ruddy Duck, 359.
 Orr, George B., The Junior Song-bird Club, 265.
 Osgood, H. W., Photograph by, 223.
 Otto, M. C., To Hatch and to Raise, 179.
- Packard, Winthrop, Field Agent, Report of, 410; Secretary's Report, 427.
 Palmer, Dr. T. S., Reviews by, 56, 118.
 Patton, Frank, Mary Patton, A. L. Campbell, and Mamie Campbell, Christmas Census, 47.
 Pearson, T. Gilbert, Editorials by, 72, 134, 202, 270, 323, 392; Least Bittern, 198; The Red-eyed Vireo 266; Turkey Vulture, 319; Photographs by, 272, 403, 418; Annual Report, 396.
 Pease, Florence Mabel, Notes from Conway, Mass., 357.

- Peck, Grace H., Pied-billed Grebe Caring for its Young, 110.
- Pell, Walden, and S. Morris, Christmas Census, 34.
- Pellow, Marion I., see Ford, Louise P.
- Perine, Keble, Haskell B. Curry and Wm. A. Denker, Christmas Census, 26.
- Perkins, Edward H., Christmas Census, 28.
- Perry, Mrs. Harvey C., Bird Neighbors, 234.
- Pershing, H. A., Secretary, Report of, 447.
- Phillips, Charles L., Christmas Census, 28.
- Pierce, Lillian W., Secretary, Report of, 449.
- Pike, Mrs. Granville Ross, Suggestions for Junior Audubon Clubs, 63.
- Pinkus, Albert, Photograph by, 71.
- Pittman, H. H., Photograph by, 133.
- Platt, Hon. Edmund, see Miner, Leo D.
- Potter, Julian K., Philadelphia Region, 51, 113, 184, 249, 309, 365; see Roland, Conrad K.
- Pratt, Margaret, Dixie: A Tame Robin, 176.
- Preble, Edward A., see McAtee, W. L.
- Pumyea, Mr. and Mrs. Nelson D. W., Christmas Census, 35.
- Raker, Mary E. Christmas Census, 47.
- Randle, Francis, A Pocket Sanctuary, 219.
- Rawsum, Francis, see Crawford, Elis.
- Raymond, Olney, Red Phalarope in Pennsylvania, 239.
- Reader, Ray E., and Willis C., Christmas Census, 41.
- Reeves, C. G., An Albino Wood Thrush, 107.
- Reid, Russell, Christmas Census, 45.
- Rhoads, Samuel N., see Linton, Albert M.
- Rice, Helen K., Christmas Census, 42.
- Richardson, Hattie E., Secretary, Report of, 421.
- Roads, Letha A., Christmas Census, 42.
- Roberts, Anna Rogers, One Family of Flickers, 347.
- Roberts, Mrs. Cora B., Secretary, Report of, 448.
- Roberts, Thomas S., M.D., Minneapolis Region, 52, 115, 185, 251, 310, 368.
- Rogers, Sergeant Charles H., Christmas Census, 38.
- Roland, Conrad K., and Julian K. Potter, Christmas Census, 36.
- Ross, Alec, see Allatt, Frank.
- Ross, Dr. and Mrs. Lucretius H., Christmas Census, 27.
- Rowland, Dr. W. H., Photograph by, 301.
- Sadler, Nettie M., and Blanche Hamson, Christmas Census, 30.
- Saunders, Aretas A., Christmas Census, 30.
- Saunders, Hattie, A Bird Time-Table, 69.
- Savage, L. F., see McConnell, Thos. L.
- Sawyer, Edmund J., Bluebird Feeding its Mate, 244; Drawing by, 245.
- Saxony, Prince Michael of, Secretary, Report of, 437.
- Schafer, John J., Christmas Census, 43.
- Schroder, Hugo H., Christmas Census, 40; Brewster's Warbler in Iowa, 303.
- Scoville, G., and T. Spencer, Christmas Census, 36.
- Shaw, J. E. Norton, Christmas Census, 28.
- Shirling, A. E., see Michaels, W. C.
- Shove, Ellen M., An Albino Robin, 300.
- Simpson, Assistant Secretary, Report of, 427.
- Smith, Elbert E., and Frank Bruen, Christmas Census, 29.
- Smith, Josephine, see Marshall, Mrs. F. W.
- Snowden, George S., Jr., see Cannon, Gabriel.
- Snyder, L. L., Tragedies of the Nest, 230.
- Spencer, Theo., An Eccentric Ovenbird, 180; see Scoville, G.
- St. Louis Bird Club, Christmas Census, 45.
- Steele, Jack, Birds That Have Come to Our House, 131.
- Steele, Paul H., Christmas Census, 46.
- Stone, Lucy B., Secretary, Report of, 434.
- Stouffer, Ira J., see McGraw, Harry A.
- Straw, Mrs. Herman F., Purple Finches, 165.
- Strong, D. K., see Brewster, W. L.
- Stuart, F. A., Purple Martins on Stuart Acres; Five Years on a Michigan Farm, 92; A Family of Screech Owls on Stuart Acres, 300.
- Sutherland, Jean, Notes on the Lark Bunting, 70.
- Sutton, George Miksch, Night Voices, 108.
- Swinton, A. A., 'Crazy' Grouse, 240.
- Swope, Eugene, Field Agent, Report of, 419.
- Synnestedt, Raymond, An Unusually-placed Robin Nest, 104.
- Taper, Thomas A., Two Thrushes, 167.
- Taylor, Clara and Warner, Christmas Census, 41.
- Thompson, W., My Bird-House, 264.
- Timmons, Raymond, see McConnell, Harry B.
- Todd, Willie, Notes from the Northwest, 128.
- Townsend, Manley B., Christmas Census, 26.
- Treganza, Mrs. A. O., My Neighbor's Back Yard, 238; Annual Report, 430.
- Tucker, Miss A. C., Young Barn Swallows Returning to the Nest, 105.
- Turner, Mrs. George M., Christmas Census, 48.
- Tuttle, N. E., Photograph by, 228.
- Tyler, Mr. and Mrs. John G., Christmas Census, 48.
- Tyler, Winsor M., Boston Region, 307, 364.
- Ushioda, S., A Red-eyed Vireo's Nest, 302.
- Van Dyke, Tertius, Christmas Census, 35; A Parakeet in a City Park, 174.
- Van Tyne, Josselyn and Claude, Christmas Census, 41.
- Veazie, Mrs. Carl H., Annual Report, 448.
- Vibert, C. W., Christmas Census, 29.
- Viator, Kate and E. W., Nip, The Young Sparrow Hawk, 225.
- Vincent, Ralph, Sanford Mosk, Alva Weiner, Joe Gutman, Fred Geiniene, J. L. Irwin, and Harold E. Hansen, Christmas Census, 49.
- Vorhies, Charles T., Christmas Census, 46.
- Walbridge, Caroline C., Secretary, Report of, 446.
- Walker, Edith F., Christmas Census, 28.
- Walter, Alice Hall, Editorials by, 58, 120, 192.
- Warfield, Benjamin and Robert, Christmas Census, 37.
- Warner, W. H., see Fordyce, Geo. L.
- Warren, F. R., Notes on Albino Robins, 246.
- Watson, C. G., J. R. McLeod, E. Daly, Mr. and Mrs. J. C. Middleton, Christmas Census, 26.
- Way, W. Scott, Secretary, Report of, 451.
- Weatherill, Charlotte, Secretary, Report of, 437.
- Weiner, Alva, see Vincent, Ralph.
- Weiser, Charles S., and Arthur Farquhar, Christmas Census, 37.
- Weisgerber, H. W., see Fordyce, Geo. L.
- Wellman, Helen H., and Gordon Boit Wellman, Christmas Census, 27.
- Wells, Caroline E., Secretary, Report of, 443.
- Welsh, F. R., Notes on Grackles and Other Birds, 105.
- Welty, Emma J., Secretary, Report of, 430.
- Wetmore, Alexander, see McAtee, W. L.

- White, Grace L., A Good Word for the Blue Jays, 181.
 Whitman, F. N., A Visit with Cedar Waxwings, 203.
 Wicks, Gertrude P., Secretary, Report of, 442.
 Wiggins, Mabel R., Christmas Census, 32;
 Hooded Warbler on Long Island, 303.
 Wilcox, LeRoy, Christmas Census, 32.
 Wiley, Farida, see Fisher, G. Clyde.
 Williams, Laidlaw, Yellow-throated Warbler in
 Central Park, 182.
 Wilson, Etta S., Christmas Census, 40.
 Wilson, Gordon, see Alexander, Robert.
 Wilson, Mrs. C. M., Secretary, Report of, 432.
 Witt, Ewald, A Home Sanctuary for Birds, 69.
 Woodward, Magnolia, Report of, 423.
 Wooten, S., see Barnes, Emily.
 Worden, Mona, Christmas Census, 28.
 Worley, John see McConnell, Harry B.
 Wright, Mabel Osgood, Our Responsibility: A
 Page from the Birds' Book of Snow, 6; Annual
 Report, 422.
 Yates, Mary F., Home Observations, 68.

INDEX TO CONTENTS

- Aconcagua Valley, Photograph of, 336.
 Advisory Council, BIRD-LORE'S, 21.
 Aigrette Violations, 75.
 Alabama, 204.
 Alaska, 72; Eagle Law of, 204.
 Albatross, Wandering, 336.
 Andrews, Roy C., Photograph of, 78.
 Arizona, 46.
 Arkansas, 73.
 Audubon Societies, Annual Report of the National
 Association of, 395; Reports of Field Agents,
 408; Reports of Junior, 404; Reports of State,
 Auk, The, reviewed, 189, 376. [420.
 Avery, Edward C., Photograph of, 432.
 Beebe's 'A Monograph of the Pheasants,' re-
 viewed, 117.
 Bent's 'Life Histories of North American Diving
 Birds,' reviewed, 371.
 Bird-census, BIRD-LORE'S Nineteenth, 25; Twenti-
 eth, 350.
 Bird Clubs, 63; Reports of, 420.
 Bird-houses, 65, 206, 212; figured, 66, 92, 93, 94.
 Bird-photography, 342.
 Bird-protection, 64, 65, 73, 74, 80, 92, 135, 219,
 307.
 Bird-study, 73, 134, 135, 257, 386.
 Birds' Bath, figured, 224.
 Birds' Songs, 108, 221, 291.
 Bittern, Least, figured, 198; 311.
 Blackbird, Red-winged, 54, 113, 115, 182, 185,
 186; Rusty, 113, 183, 185, 186; Yellow-headed,
 52.
 Bluebird, 54, 116, 173, 186, 187, 244, 369; figured,
 245; young figured, 231.
 Bluebird, The, noticed, 190.
 Booby, 89.
 Brewster William, Obituary, 277; photographs
 of, 277, 280, 283, 285; Memorial Fund, 378.
 Buffalo, Audubon Society of, 137.
 Bufflehead, 54, 186.
 Bunting, Indigo, figured, 3, 69, 366, 368; Lazuli,
 253; Snow, figured, 352.
 Butcher-bird, Northern, 54, 116.
 California, 48, 238, 420, 439, 444.
 Canvasback, 53; figured, 2.
 Cardinal, 246, 310; figured, 344.
 Cedarbird, 182; Chapman's 'Our Winter Birds.
 How to Know and How to Attract Them,'
 reviewed, 376.
 Chat, Yellow-breasted, 83, 109; figured, 86.
 Chewink, 185.
 Chickadee, 51, 53; Black-capped, 50, 112; Long-
 tailed, 369.
 Chile, Bird-Life in, 333.
 Coker's 'Habits and Economic Relations of the
 Guano Birds,' reviewed, 372.
 Colorado, 46, 54, 116, 252, 369, 421.
 Condor, The, reviewed, 56, 116.
 Connecticut, 29, 30, 243, 360, 407, 438, 441, 444.
 Coot, American, 185, 186, 240.
 Cormorant, 89; Bougainville's, figured, 373;
 Double-crested, 310.
 Cowbird, 113, 179, 183, 184, 185.
 Crane, Sandhill, 54.
 Creeper, Brown, 112, 115, 184, 186; figured, 381.
 Crossbill, American, 251; Red, 112, 247, 312.
 Crow, 112, 183; American, 100, 102; Fish,
 figured, facing, 81, 102; Florida, 100; Hooded,
 102; Northwestern, figured, facing, 81, 100;
 Southern, 100; Western, 100.
 Crows, Destruction of, 202.
 Cuba, Bird-Life in, 11.
 Cuckoo, Black-billed, 52, 250, 365; Central
 American, figured, 14; Yellow-billed, 310, 369.
 District of Columbia, 38, 52, 114, 250, 310, 423.
 Dove, Mourning, figured, 10, 51, 54, 115, 184,
 185, 253.
 Dowitcher, 308, 365.
 Duck, Black, 184, 185; figured, 436; Lesser
 Scaup, 54, 185, 186, 249, 311; Ring-necked, 186,
 251; Ruddy, 185, 311, 359; Wood, 311.
 Eagle, American, 72; Slaughter of the, 204;
 Golden, 253.
 Egret, American, 360, 365; young figured, 413.
 El Hornero, reviewed, 56.
 Evans, Frank C., Photograph of, 426.
 Farwell's, 'Bird Conservations Near Chicago,'
 reviewed, 376.
 Feeding Birds, 64, 70, 380; figured, 380, 383, 384,
 385.
 Finch, Diuca, figured, 335, 337, 338; Purple, 52,
 54, 112, 115, 116, 165, 184, 186, 248, 312.
 Flicker, 184, 186, 310, 347; Northern, 53, 185.
 Flamingoes, Nesting-site of, figured, 334, 335.
 Florida, 40, 434, 451.
 Florida Audubon Bulletin, noticed, 206.
 Flycatcher, Acadian, 366; Olive-sided, 311;
 Traill's, 251, 369.
 Forbush's 'Monthly Bulletin of Information,'
 noticed, 77.
 Gallinule, Florida, 311.
 Gnatcatcher, Blue-gray, 184, 365.
 Golden-eye, 84, 249.
 Goldfinch, 51, 365.

- Goose, Canada, 54, 249; figured, 133; Domestic, 114.
 Goura, Plumes of the, figured, 397.
 Grackle, Bronzed, 53, 182, 185, 248; Purple, 105, 184, 310.
 Grebe, Holboell's, 250; Horned, 250; Pied-billed, 53, 110, 186, 310, 311, 365; Short-winged, 164; figured, 163; wing figured, 164.
 Grinnell, Bryant and Storer's, 'Game Birds of California,' reviewed, 188.
 Grosbeak, Blue, 369; Cardinal, 115; Evening, 50, 112, 115, 183, 240, 247, 307; Pine, 50, 51, 53, 112, 113, 357; Rose-breasted, 248.
 Grouse, Ruffed, 77; scarcity of, 77, 240; figured, 259, 368.
 Harris's 'Birds of the Kansas City Region,' reviewed, 189.
 Hawk, Accipiter, 364; Broad-winged, 105, 114; Duck, 251, 358; Fish, 186; Marsh, 114, 116; Red-shouldered, 114; Redtailed, 51, 114; Rough-legged, 116; Sharp-shinned, 114; Sparrow, 114, 186, 225; figured, 226.
 Heron, Black-crowned Night, 113, 311; Great Blue, 185, 186; figured, 271, 272, 310, 367; Green, figured, 272; Little Blue, 365.
 Hummingbird, Giant, figured, 339; 341; Ruby-crowned, 339; Ruby-throated, 304.
 Idaho, 448.
 Illinois, 43, 424, 437.
 Indiana, 43, 426, 435, 447; Audubon Society of, 212.
 Iowa, 44, 135, 303; Conservation Association of, 135.
 Jay, Alaska, 356; Black-headed, 171; Blue, figured, facing 149; 181, 310; Blue-fronted, 171; Canada figured, facing 333; 354, 356; Coast, 171; Florida Blue, 170; Gray, 355; Green, figured, facing 149; 171, 172; Labrador, 354, 356; Long-crested, 171, 370; Newfoundland, 354; Northern Blue, 170, 172; Oregon, figured, facing 333; 354, 356; Piñon, figured, facing 333; 355, 356; Queen Charlotte, 171; Rathbun's 355; Rocky Mountain, 354, 356; Steller's, figured, facing 149; 170, 171, 172.
 Journal of the Museum of Comparative Oölogy, The, reviewed, 255.
 Junco, 51, 52, 54, 115, 182, 186, 247, 345, 366.
 Kansas, 360.
 Kentucky, 44, 427.
 Killdeer, 113, 173, 183, 184, 185, 186, 187, 251.
 Kingbird, 248, 252, 364, 366, 369.
 Kingfisher, 113, 116, 186; Belted, 185.
 Knot, 365.
 Lago de San Pedro de Atacama, Photograph of, 334.
 Laguna Fria, Photograph of, 340.
 Lark, Horned, 186, 252; figured, 352; Prairie Horned, 181, 182, 302; figured, 353.
 Legislation, 80, 204, 276.
 Longspur, Chestnut-collared, 370; Lapland, 115; figured, 351.
 Loon, 186.
 MacMillan's 'Four Years in the White North,' reviewed, 55.
 Maine, 26, 180, 258, 417, 436.
 Mallard, 54, 115, 185, 311, 369.
 Man-o'-War Bird, 11, 87.
 Martin, Purple, 92, 96-99, 184, 185, 186, 250, 305, 310, 366; figured, 92.
 Maryland, 38.
 Massachusetts, 27, 28, 50, 112, 247, 306, 357, 408, 410, 427, 453.
 Meadowlark, 54, 113, 116, 182, 183, 185, 186.
 Merganser, American, 185; Hooded, 311; Red-breasted, 184.
 Merlin, Richardson's, 253.
 Michigan, 40, 41, 237.
 Migration, Bird, 307, 354.
 Miller, Olive Thorne, Obituary, 76.
 Miller's 'In the Wilds of South America,' reviewed, 55.
 Minnesota, 41, 42, 52, 115, 251, 310, 442.
 Missouri, 44, 45, 54, 115, 252, 368.
 Mockingbird, 108, 243, 310.
 Montana, 46, 443.
 Mosley's, 'Trees, Stars and Birds,' reviewed, 117.
 Nebraska, 46.
 New England, Bird-life in, 408.
 New Hampshire, 26, 428.
 New Jersey, 34, 35, 249, 429, 437; Heron Colony in, 271.
 New York, 30, 31, 32, 33, 51, 112, 137, 240, 248, 301, 303, 308, 364, 432, 433, 444, 445, 449.
 Nighthawk, 248, 250, 252, 291, 367, 368.
 North Carolina, 39.
 North Dakota, 45, 46.
 Norton, Arthur H., Photograph of, 418.
 Nova Scotia, 258.
 Nutcracker, Clarke's, figured, facing 333; 355, 356.
 Nuthatch, 360, figured, 361; Red-breasted, 50, 114, 115; Slender-billed, 369; White-breasted, 1, 51, 186, 302.
 Ohio, 42, 43, 53, 114, 409, 429, 434.
 Ontario, 25, 26, 307, 438.
 Oregon, 47, 242, 430.
 Oriole, Baltimore, 307, 366, 368; Bullock's, 370; Orchard, 252, 366.
 Osprey, 185.
 Ovenbird, 52, 180, 252, 312; figured, 228; nest figured, 228.
 Owl, Barn, 184, 249; Burrowing, 116; Great Horned, 18, 116; figured, 19; Long-eared, 51, 114, 116, 187; Saw-whet, 51, 52; figured, 71; Screech, 116, 300, 310; figured, 233, 301; Snowy, 50, 53.
 Panama, Bird-life in, 11, 87.
 Paroquet, figured, 12, 174.
 Pearson, Elizabeth, Photograph of, 418.
 Pearson and Brimley's, 'Birds of North Carolina,' reviewed, 375.
 Pelican, Brown, 87; Chilean Brown, 87; figured, 88; White, figured, 412.
 Pennsylvania, 36, 37, 51, 114, 239, 240, 242, 309, 365, 431, 440, 449, 452.
 Peru, Bird-life in, 87, 157.
 Pewee, Wood, 310.
 Phalarope, Red, 239; Wilson's, 252, 310, 311.
 Phoebe, 184, 185, 186, 304, 365.
 Photography, Bird, 342.
 Pintail, 249, 311.
 Pipit, American, 114, 184.
 Plover, Black-bellied, 365; Black-breasted, 308; Piping, 309, 365; Ring-necked, 308; Semipalmated, 250, 365; Upland, 185, 251, 366.
 Quebec, 25.

- Rail, Virginia, 311; King, 249.
 Raven, American, 23, 24; Clarion Island, 23;
 Northern 23; Southeastern, 24; White-necked,
 24; figured, facing 1.
 Redhead, 53, 54.
 Redpoll, 115, 186.
 Redstart, 52, 149, 366, 386; figured, 155, 223.
 Rhode Island, 28, 430.
 Ridgway's 'Birds of North and Middle America,'
 Part VIII, reviewed, 375.
 Roberts' 'Water Birds of Minnesota; Past and
 Present,' reviewed, 374.
 Robin, 102, 103, 114, 116, 176, 182, 184, 185, 186,
 187, 243, 244, 248, 310, 362, 369, 389; nest fig-
 ured, 103, 104; albino, 246, 300, 303; figured,
 246.
 Roosevelt Memorial Fountain, 139; List of Con-
 tributors to the, 207.
 Sanctuaries, Bird, see Bird-Protection.
 Sandering, 365.
 Sandpiper, Least, 250, 308, 365; Red-backed, 249,
 250; Semipalmated, 250, 308, 365; Solitary,
 308, 309; Spotted, 185, 287, 309; figured, 287,
 288; nest and eggs figured, 289; Stilt, 308;
 Western, 366; White-rumped, 250.
 Sapsucker, Yellow-bellied, 113, 116, 185, 250,
 364, 366.
 Saunders' 'Golden Dicky: The Story of a Canary
 and His Friends,' reviewed, 373.
 Scoter, American, 249.
 Scoville's 'The Outdoor Club,' reviewed, 254.
 Season, The, 50, 112, 182, 247, 307, 364.
 Selborne from the Hanger, Photograph of, fac-
 tively, 54, 185, 369. [ing 215.
 Shrike, Loggerhead, 365; Migrant, 185, 186, 310,
 366; Northern 50, 51, 112, 115, 183, 302.
 Siskin, Pine, 52, 182, 183, 187, 247, 312, 357.
 Skimmer, 309.
 Skylark, 201.
 Snipe, Wilson's, 115, 184, 185, 186, 368.
 Solitaire, Townsend's, 242.
 Song Birds, Killing of, 136.
 Sora, 249, 251, 311.
 South Carolina, 39.
 Sparrow, Chipping, 113, 183, 184, 185, 253; Clay-
 colored, 370; Field, 185; Fox, 50, 51, 115, 182,
 184, 185, 365; Gambel's 54, 187, 253; Grass-
 hopper, 308, 366; Harris's, 54, 116, 186;
 Lincoln's 249, 252; Savannah, 54, 184, 185; Song,
 53, 54, 114, 116, 182, 183, 185, 186, 248, 366,
 369; figured, 4, 5; South American, 158; Swamp,
 185, 186, 365; Tree, 51, 54, 112, 115, 116, 186,
 369; Vesper, 113, 183, 184, 185; White-crowned,
 51, 116, 365; figured, 197; White-throated, 51,
 52, 247, 312, 365; figured, 4; White-throated
 Song, 158; figured, 159.
 Squaw, Old, 306.
 Starling, European, 50, 240, 248, 310.
 Stilt, Black-necked, 308.
 Swallow, Bank, 250, 310; Barn, 51, 105, 175,
 183, 309, 364; Blue-backed, figured, 163; Cliff,
 174; Tree, 183, 184, 185, 248, 308.
 Swan, Whistling, 54, 186.
 Swift, Chimney, 250.
 Tanager, Scarlet, 250, 312; figured, 346.
 Teal, Blue-winged, 54, 311, 369; Green-winged,
 311, 249.
 Tennessee, 45, 423.
 Tern, Black, 249, 251, 367; Common, 309, 365;
 Forster's, 311; Least, 365.
 Texas, 110.
 Thrasher, Brown, 113, 114, 184, 185.
 Thrush, Gray-cheeked, 251; Hermit, 168, 183,
 185, 186, 308; figured, 168, 169; Olive-backed,
 167, 249, 250, 365; figured, 167; Wilson's 248;
 figured, 91; Wood, 107 (albino), 308, 310, 366.
 Titmouse, Tufted, 310.
 Towhee, 113, 185, 252; figured, 343.
 Turco, El, figured, 337.
 Turnstone, 365.
 Utah, 137, 239, 430; Audubon Society of, 137.
 Vermont, 27.
 Vireo, Bell's, 369; Blue-headed, 366, 367; Phila-
 delphia, 366; Plumbeous, 253, 369; Red-eyed,
 302, 307, 367; figured, facing 266; Warbling,
 248, 307, 369; White-eyed, 369; Yellow-throated
 248, 250, 307, 308, 366.
 Virginia, 39.
 Warbler, Audubon's, 370; Bay-breasted, 250, 251;
 Black and White, 52, 149, 186, 250, 296; figured,
 297; Blackburnian, 82, 150, 151, 248, 251, 312;
 figured, 83; Black-poll, 50, 52, 248, 250, 364;
 Black-throated Blue, 51, 85, 151, 153; Black-
 throated Green, 149, 151; Blue-winged, 251;
 Brewster's, 303; Canadian, 150, 152, 302, 312;
 figured, 156; Cape May, 249, 180, 251; Ceru-
 lean, 150; figured, 82; Chestnut-sided, 149, 312;
 figured, 84; Golden-winged, 150, 241, 249, 251,
 303; figured, 241, 151; Hooded, 150, 250, 303;
 Kentucky, 249, 251; Magnolia, 52, 150, 151,
 248, 252; Mourning, 152, 252; figured, 81, 82;
 Myrtle, 50, 113, 114, 186, 248, 306, 364, 365,
 368; figured, 345; Nashville, 113, 151; North-
 western Palm, 51; Northern Parula, 150;
 Parula, 248, 250, 366; figured, 152; Pine, 150,
 184; Prairie, 52, 308; Prothonotary, 242, 249,
 252; Sycamore, 252; Tennessee, 248, 249, 251,
 252; Wilson's, 249, 252; Yellow, 179; figured,
 149; Yellow Palm, 183, 184; Yellow-throated,
 182, 250.
 Water-Thrush, Grinnell's, 251; Louisiana, 153,
 185, 301, 366; figured, 150; Northern 152, 250;
 figured, 154.
 Waxwing, Bohemian, 54, 115, 116, 186; Cedar,
 116, 252, 293, 370, 294, 295; figured, 293.
 West Virginia, 38, 77.
 Whip-poor-will, 250, 367.
 White, Gilbert, Photograph of home of, facing
 215.
 White-throat, Andean, 158.
 Willet, 365.
 Wilson Bulletin, The, reviewed, 254.
 Wisconsin, 41, 450.
 Witherby's 'A Practical Handbook of British
 Birds,' reviewed, 254.
 Woodcock, 51, 185, 249.
 Woodpecker, Downy, 50, 51, 112; Hairy, 50, 51,
 112, 183, 248; Lewis's, 370; Pileated, 114, 357,
 367; Red-headed, 186, 303, 310.
 Wren, Carolina, 310; House, 159, 173, 246, 249,
 250, 303; Winter, 52, 184.
 Yellow-legs, 365; Greater, 308; Lesser, 308.



1. WHITE-NECKED RAVEN

(About one-sixth natural size)

2. RAVEN

Bird-Lore

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No. 1

When the North Wind Blows*

By A. A. ALLEN, Ph.D., Assistant Professor of Ornithology, Cornell University
With photographs by the Author

THE winter Ducks offer another opportunity for the bird photographer. Every winter there are large flocks of Canvasbacks, Scaups, and Red-heads on Cayuga Lake. There are certain weed-beds upon which they feed, but none of them brings the birds close enough to the shore for successful photography. It is not difficult, however, when one locates the feeding-place of a flock, to bait them up to a blind by scattering a good supply of corn from the bed where they are feeding up to the shore. An amusing incident occurred last winter in such a blind that will illustrate how close the birds can be drawn in.

There was a small flock of Black Ducks frequenting the spot where the Canvasbacks were being fed in about four feet of water. They were able to

*Concluded from BIRD-LORE for December, 1918



AT THE PERMANENT FEEDING-STATIONS MUCH CAN BE LEARNED OF THE HABITS
OF THE DIFFERENT BIRDS

This photograph shows the 'intimidation display' of the White-breasted Nuthatch



A FEEDING-STATION FOR DUCKS

The Canvasbacks have been lured to the shore by scattering corn from the weed-beds where they were feeding up to the blind

dive to the bottom for the grain, and, when alone, did not hesitate to do so, diving with a big splash and using their wings to get to the bottom. When the Canvasbacks were present, however, they seemed a little shy about their clumsiness and usually hunted along the shore. On this particular day a little grain had been spilled in front of the blind, which was merely a few old timbers put up like a billboard close to the water. The Black Ducks, working along the shore, finally came to the grain spilled in front of the blind. We could hear them rattling the gravel and occasionally even see their bills when they reached beneath the lowest board for a grain that was inside the blind. Of course, we kept absolutely quiet. Finally one old bird discovered a trail of grain that led in behind the blind to the sack upon which we were sitting, and never suspecting the surprise in store for him, followed it up until we could feel his hard bill actually grubbing the corn from beneath us. The Black Duck is the wisest and wariest Duck that we have, and finally the strain of keeping absolutely quiet and knowing that Solomon himself was eating off our coat-tails got too much, and a muffled snicker brought the comedy to an end. With a frightened, we almost thought, sheepish, squawk, the blacky leaped over our heads and gave my unoffending ear a bang with his wing as he passed.

When birds are watched at close range and for long periods, as is usually the case at permanent photographic stations, one is continually learning new habits of each species or learning to interpret observations that he has made through his glasses. For instance, the little courtship performances of the Chickadees and Nuthatches had entirely escaped the author's attention until he watched them at his feeding-stations. It seems that bright colors, song, display, and aggressiveness are not the only qualities which the females exact. The males must prove that they are good providers as well. One can often see the male Nuthatch or Chickadee swoop over to the feeding-station from an adjacent tree where he has left the female, gallantly hack open a sunflower seed or rip off a piece of suet, and, with another swoop, return to his prospective and present her with the titbit. Sometimes they will come to the feeding-station together, and yet the female makes no effort to eat until the male has presented her with food which he has selected.

In the wings and tail of the Nuthatch are some conspicuous black and white marks which would ordinarily be considered 'flash colors,' because they are displayed only when the bird is in motion and concealed when the bird is at rest. On numerous occasions we have observed at close range at feeding-stations how these 'flash colors' are of direct service to the birds in another way, and on two occasions secured photographs of the bird in action.

It seems the Nuthatch is quite an aggressive bird and wants things all his own way. If other birds are feeding when he wants to eat, he promptly drives them away or, at least, attempts to do so, although with the native birds that are



AN INDIGO-BIRD COMING TO A FEEDING-STATION

There are always surprises in store for those who will keep up their feeding throughout the spring

accustomed to his bravado, he sometimes has a hard time. His first procedure is to swoop down at the offending birds as though he were a Hawk. Failing to frighten them away, he alights nearby, with wings and tail spread and feathers shaken out. The aforementioned black and white marks now become very conspicuous and serve to make his increased size all the more impressive.



SPRINGTIME SPARROWS, THE SONG AND WHITE-THROATED

Birds and flowers are always closely associated, and the spring feeding-station offers the opportunity to show this photographically. When the White-throats pass through central New York, the saxifrage is in bloom and the hepaticas are past their prime.

Pointing his long bill at the offenders, he sways from side to side, still further augmenting his size and the effect of the marks, and advances toward them. This usually produces the desired effect and the other birds leave, whereupon he proceeds to carry off the food and hide it in crevices in the bark where it will be most available to himself and least available to his competitors. Ordinarily, the other birds leave before the Nuthatch comes into the field of the camera, but the preceding photograph shows him in action when a Sparrow, either more brave or more stubborn than the rest, has clung to his post by the food.

We might go on recounting the little incidents that occur at arm's length and the observations that might be made at winter feeding-stations. When the winter is over, we have usually become so attached to our regular pensioners that we hate to see the snow melt for fear the birds will disappear. Some of them will go, but if we keep up the supply of food, others will take their places and present still greater opportunities for the camera. Each spring new birds discover one's gallery, so that there is a perpetual round of surprises. All of the Sparrow tribe will find it sooner or later if only the winter ration of grains is

kept up, and, when one learns to use meal-worms, doughnut crumbs, and fruits, almost any bird can be expected. A year ago, four Indigo-birds made regular trips to the grain, and Catbirds and House Wrens were daily customers at the suet counter.

The widest opportunity for one's ingenuity, at these feeding-stations in the spring, however, is offered by transforming the setting in which the birds are to be photographed so as to make it appropriate to the season and the bird. Birds and flowers are always associated, and if one can show the plants that are in flower at the time the bird is passing through, it adds a great deal to the photograph. Compare, for example, the photograph of the pair of Song Sparrows with that of the Song and White-throated Sparrows.

Two pairs of Chickadees that were with us last winter raised broods of seven each in nesting-boxes near the house this spring; the Downy Woodpecker nested in a dead branch of the elm shading the porch, and the Nuthatch built in a knot-hole a hundred yards up the ravine. Now, as I write, it is August, and summer birds are all about us, but somehow our associates that stayed by us when the north wind blew are still the favourites, and we look forward to the coming of winter with a little less reluctance when we know that we can count on their companionship amid the snow and ice to come.



A PAIR OF SONG SPARROWS

The permanent feeding-station has many advantages. Upon this log seventeen species of birds were photographed

Our Responsibility

A PAGE FROM THE BIRDS' BOOK OF SNOW

By MABEL OSGOOD WRIGHT

THERE are very few pleasures that do not carry with them a responsibility in proportion to their keenness, and I doubt if many of those who are bird lovers and protectionists in theory, really understand the responsibility entailed in living up to their creed.

The Yearbook of Bird-life is written in many volumes, and its illustrations glow with all the colors of earth and sky and sea. Its stories are both brief tragedies and joyous serials of comedy and melodrama; then, after it all passes to the broken strains of the songs of the fall migration, comes a sequel as it were, the record of those few hardy clansmen that find it possible to stay with us through the shut-in months. A thin volume this, bound in white and black, threaded with random ribbons of sky-blue with red and gold of sunsets and sun-ups for markers—*The Birds' Book of Snow*, which we must read carefully if we would intelligently lure these brave hearts to take shelter in our gardens or in the windbreaks of evergreens; and if they accept the invitation, treat them consistently.

This page of *The Birds' Book of Snow* that I am transcribing for those who may not understand the sign language of nature, was written in Birdcraft Sanctuary and the surrounding hill country during the bitter winter of 1917-18.

The protection of our winter birds, from our human standpoint, must view them from several angles—death by shooting and trapping, death from the presence of their natural enemies, and death from starvation, due to wastage of their natural food-supply. The first cause may be obliterated by wise laws faithfully enforced; the others offer a more complex problem. If we would have the birds of winter with us, we must be systematic in all our dealings with them, as we would be with domestic fowls or cattle. We should not overload the feeding-table one week—at a time when natural food is plenty—and then go away and leave it bare for perhaps the most icebound, stressful month of winter. We must not make brush tepees and branch shelters and then allow them to become the lairs of stray cats, rats, and weasels, for by so doing we offer a false hospitality and assume a responsibility only to shirk it; better make no effort, and let the birds pass by.

Now I hear someone bringing up the well-worn quibble: "If winter birds are valuable because they eat the grubs hiding in the tree bark, is it not doing away with their usefulness to feed them, as well as making paupers of them." People who argue thus have never even turned the first page of *The Birds' Book of Snow* or they would know that all the human help is auxiliary work, at best a sort of first-aid to bird-life made necessary by a climate that is a professional juggler with his trick-box, a thing never to be wholly understood.

(Some pages chosen at random.) *Time*, February; *place*, Birdcraft, and about the cottage on the hill. *Recorders*: Chickadees, Purple Finches, Juncos, Tree Sparrows, a pair of Winter Wrens, an Acadian Owl, a Brown Thrasher that did not migrate, a flock of Pine Grosbeaks, half a dozen Black-crowned Night Herons, and some Pheasants.

Thermometer, four below; an hour after sunrise; trees ice-coated; a sound of chopping is heard, with a ring of metal on ice. Chickadees flitting about the feeding-shelf by the house porch find it empty; they move over to another inside the animal-proof fence. A great yellow dog, gaunt and hungry, standing as high as a wolf, comes nightly for the suet; this last time, however, the warden discovered him, and henceforth he will put all bones and fats, not only high up but behind a double screen.

The warden comes up from the spillway of the little pond; though the steely cold has locked all other sounds, running water babbles; the birds leave their food and fly toward the sound as by a single impulse; follow them, walking slowly, for the frozen snow underfoot gives out shrill squeaks like the warning cry of small rodents.

The water is gushing over the narrow spillway from under the heavy ice that covers the pond, and runs clear, a tiny thread of a stream, but free and shallow between the heavily grassed banks of the overflow, screened by bushes from the north and west, a veritable trap to catch and hold the early morning sunbeams.

Bird-calls and scraps of song come from the water, and there is much splashing and preening as the birds bathe and jostle each other, while some of the more timid await their turn. Mind you, it is below zero on the north side of the hill. It was the warden's responsibility to see that the winter bathing-place was kept open in the one spot where the water from some warm springs in the pond fed it, and all that bitter winter the little stream was freed each morning by a few strokes from the axe and ran all day long.

Thus, word was passed through the winter-braving tribes of the region that not only was food to be had in Birdcraft, but water, precious water.

As the warden made his morning rounds, keen eyes searching ground, trees, and sky, he saw two sets of footprints going toward heavy brush; those of a Pheasant running parallel with those of a weasel that at this time wears his white winter coat and masquerades as royal ermine.

Expecting a tragedy, he pushes through the brush to find, not a dead Pheasant, but a rabbit, whose life-blood the weasel has sucked and then abandoned the victim; a little beyond, a glistening heap of feathers that stirs as if moved in some way, gives the warden a start, for a gorgeous male Pheasant is held by the tail a fast prisoner, the moist snow of the previous evening having turned to ice, forging chains of the long feathers. Without the foresight which makes this daily patrol the warden's self-imposed responsibility, this Pheasant would have died of hunger and cold.

Coming out by a different path, a small bunch in a young cedar held the warden's eye; he went to it, thinking to find an undiscovered nest. No, it was a tiny Owl, the Acadian, the smallest of his tribe, almost dead from hunger, as an overlapped claw impeded his natural means of hunting, and the cold driving wind was rapidly doing the rest. Hunger and cold a bird may endure, but these, plus wind, will overcome even a deeply feathered Owl.

He was taken to the workshop, thawed out, his overlapping claw straightened, given a place in a "hospital cage," and some Starling meat placed at his disposal. Before the month was out he was given the liberty of the cellar, and boarded himself and something over by mouse-catching.

A sheaf of rye was set out in the open, and all the winter birds were pecking at it; even the Thrasher, who for some whim had not migrated but lived under the cottage porch, was interested. A shadow passed above, and with shrill cries of terror the birds disappeared in the nearest brush. All but one Purple Finch, who was too late. The Sharp-shinned Hawk fell on him and darted away. There is no more agonizing sound than that of a bird who sees the Hawk about to grasp it; this is a tragedy against which the protector of winter bird-life must ever be on guard. In itself this is no small responsibility; can you accept it?

The Thrasher had many narrow escapes from Sharp-shinned and Cooper's Hawks. A real summer, insect-eating bird like the Thrasher Mockingbird or Orchard Oriole that insisted on remaining during the winter of 1907, is really too great a responsibility as a winter guest; they are ill at ease in bare trees, and I would much prefer that such as these would not take the notion once in a time to keep me company.

Though this Thrasher survived last winter and broke into full song before any others of his tribe had arrived, he was always on our minds, and had to be treated as something not normal, an unpleasant condition unless to prove some theory. To my mind, half the real pleasure to be won from nature is from coming in contact with the normal and meeting everything according to its season.

Where winter birds gather in unusual numbers, because of food and shelter, there will Hawk and Shrike follow. The deep woodlands are then birdless, and the colder the winter the greater the hunger, while the only remedy is eternal vigilance—the carefully watched trap with the humane, padded jaws, and the well-aimed gun.

The Shrikes, to my mind, should not be protected during their winter migration, the Northern on its southward trip and the Loggerhead on its northern wanderings; their toll of small birds is too great. Let our Wise Men, who framed the generally wise A. O. U. Law, look into the matter; let them examine the blood-splashes on the pages of *The Birds' Book of Snow* and see its records of headless songsters, either left on the ground or hooked on bushes and fence-barbs. Now the warden who has been reading in the Book for four

years, never places food either on shelf or ground without flanking it with a shelter, wherein the small birds may dive for safety; and from these shelters lead brush-covered passages, so that several ways of escape are offered. Too often have his tame Chickadees been plucked almost from his hands by these robbers.

Next to the active birds of prey in *The Birds' Book of Snow* come the Starlings to prey upon the food of the winter birds, and thus are indirect destroyers of them. Hereabouts are thickets of red cedars, bay and barberry bushes, masses of both the black and red choke-berry and several great pepperidge trees, all heavily laden with fruit in October. What happens? Unless the warden is on the watch when fall sets in, all of a sudden, a flock of Starlings one thousand strong, will settle in these trees, and in a single hour the food store that would last our winter birds a month or more is gone!

So, also, during last February, when the thaws released the ice-clad berries of the species above mentioned, and the hungry Robins and Bluebirds began to feed eagerly, flocks of Starlings tried the same method, and the native birds, some of which had braved the winter and others the pioneers of spring, were driven to come about the building and beg food from no fault of their own.

Sentimentalists who take only the sweet spring whistle of the Starling into consideration, look for yourselves at the black marks against it, not only in the *Snow Book* but in the whole Yearbook of the birds. Beside the voracious, quarrelsome Starling, changed in its habits by expatriation, the English Sparrow is harmless as thistledown.

A recent history of Connecticut birds does not list the Black-crowned Night Heron as a winter resident, yet they sign their names annually in the *Sanctuary Snow Book*, and, after feeding along the tide marshes at low water, they come back in a small flock to roost in the spruces across the road and take their daily drink in the overflow at Birdcraft. The February day of zero weather had no terrors for them, adding one more proof that it is lack of food and water and shelter, more than cold, that scatters the winter birds that might remain.

Near the bungalow are tulip trees, and all winter the wind had chattered among their dry, cupped seed-pods. One February day flowers bloomed suddenly along those bare branches, and the *Snow Book* boasted a picture of summer colors—a great flock of Pine Grosbeaks, many of them adult males, perched in rows, posing as by a special arrangement, quite putting in the shade the male Purple Finches, heretofore the brightest bird of winter.

In late February, notes of music broke the monotony of the *Snow Book*, just as the black and white of its binding was gently suffused by the reddening of swamp maple twigs and the yellowing of willows.

The returning Song Sparrow whispered his song happily in the alders that supply him with food, for the Starling has not yet learned to adapt his clumsy beak to stripping the little seeds from the alder cones which supply

this Sparrow late winter and early spring food, a reason why we find the first Song Sparrows in the alders. This is the time that the tree-trunk birds are making their best records—the Downy and Hairy Woodpecker and the Nuthatches—yet it is the time that the casual and theoretical bird-lover and protectionist sees the least to record in the great outdoors. Why is it? Because so many things born of impulse and the fad-following spirit, instead of true interest, do not survive their first real winter test, and never a one of these reads even a single chapter in *The Birds' Book of Snow*. They build some impossible bird-houses very late in the spring and place them as near together as flats in a tenement; they may throw out handfuls of crumbs and soon give up even this feeding because, with improper food, they do not at once attract tame Chickadees, and then they declare 'there are no birds in our region to be protected,' simply because they do not feel the responsibility that goes with success in attracting and loving anything animate.



YOUNG MOURNING DOVES, FULLY FEATHERED AND CAPABLE OF QUICK, STRONG FLIGHT, BUT STILL TOO INEXPERIENCED TO FEAR THE PHOTOGRAPHER
Photographed by Dr. R. W. Homan, Webster City, Iowa

Notes from a Traveler in the Tropics

II. CUBA TO PANAMA

By FRANK M. CHAPMAN

With illustrations by Louis Agassiz Fuertes

TRAVELERS nowadays soon learn to regard steamship announcements as mere 'scraps of paper' which are not to be taken seriously. I was not surprised, therefore, to learn that sailings on the line by which we had expected to reach Cristobal, from Cuba, were cancelled, and correspondingly pleased when a steamer bound for the desired port arrived from Spain, and on her we left Havana on the evening of October 26. With steam-coal at \$28 per ton, time is cheaper than fuel, so we jogged along at about three-fourths speed, over a sea so smooth that the entire voyage of four and a half days might have been made in a canoe.

Our route ran around the western end of Cuba and thence down the Caribbean. It was, therefore, not far from the flight-line of birds which migrate down the eastern coast of Central America, or, perhaps, indeed, over the very waters through which we passed. A month earlier we should doubtless have been visited by numbers of the feathered voyagers, but a Nighthawk and two Barn Swallows, which were first seen on the evening of the 29th, when we were in about latitude 14° , longitude $81^{\circ} 30'$, were the only land-birds observed. The Nighthawk evidently found our nine miles an hour too slow a pace for him and decided to continue his voyage without convoy, but two Barn Swallows (presumably the birds of the night before) accompanied us all the following day, and many were the circles they flew about the ship to accommodate their rate of progress to ours.

Of water-birds there were only a single Booby and one Petrel (*Aestrelata* ?). The latter, after the manner of his kind, was skimming the seas at high speed, as though in a desperate hurry to find something which he expected to discover at the next wing-stroke, but which never seemed to materialize. It is to be assumed that these strong-winged, tireless hunters are sometimes successful, but they must capture their prey 'in their stride,' as it were, for they seem never to pause in their rapid flight.

As we approached Cristobal, on the morning of October 31, hydroplanes, those recent additions to our avifauna, flew out to meet us, and Man-o'-war-birds, with an utter disregard for the principles of gravitation, 'floated lazily' overhead. I use this hackneyed phrase without compunction, for, whatever it may have been applied to originally, it belongs, by reason of its especial fitness, to the Man-o'-war-bird. That he can float, no one who has watched him for hours, sailing serenely through the sky without detecting a movement of the wings, will deny; while, if laziness is to be measured by the difference between what one does and what one can do, the usual inaction of this bird of incalculably powerful flight more than justifies the application of the term.

On a few occasions I have seen Man-o'-war-birds give marvelous exhibitions of their mastery of the air, but to 'float lazily' seems to be their principal occupation.

The first bird-note which the newly arrived traveler will probably hear in Cristobal will be not the chatter of Sparrows but the shrill twitter of Paroquets (*Brologeris*). If they be passing on the wing, he may have a glimpse of them, but if they are perched in one of the cocoanut palms which line the streets, he may search for them in vain. In Cristobal, Ancon, and Balboa, these little green birds never fail to give welcome emphasis to their tropical surroundings.



"The first bird-note which the newly-arrived traveler will probably hear in Cristobal will not be the chatter of Sparrows, but the shrill twitter of Paroquets (*Brologeris*).

The bird-student whose first view of a tropical forest is from a train crossing the Isthmus of Panama, will be disappointed in the number of birds he sees. But, aside from the fact that his journey may not be made during the small part of the early morning and smaller part of the late afternoon when birds in the tropics are active, the bird-life of a tropical forest cannot be studied from a railway train! However, a sharp lookout is sure to be rewarded, and the possibilities are unlimited. Soon after leaving Cristobal, the train passes through a marsh where, invariably, a number of Herons may be seen. Little Blues, in both slaty (adult) and white (immature) plumage, are always the most common species of this family; then follow Louisianas and Little Grays (allied to our Little Green), with rarely White Egrets of both species. Boat-tailed Grackles are common at both sides of the railroad. I saw a single Jacana, daintily raising its wings in characteristic pose until they met above its back, and one Giant Kingfisher (*Ceryle torquata*), which resembles our Belted Kingfisher but is about three times as large. A telegraph wire seemed a peculiarly inappropriate perch for this bird of jungle-bordered streams. The wires also served as lookouts for numerous Sparrow Hawks. In brushy places there were small companies of Anis, their complaining notes drowned by the noise of the passing train.

After passing Gatun, the railroad runs for miles along the shores of Gatun Lake and crosses arms of it on causeways. The flooding of this area of necessity

killed a great number of forest trees, and their grey skeletons, crowded with parasitic plants, still mar a large part of its shore-line. But I note a marked decrease in their number since my last visit to this region, two years ago, and ere long they will doubtless all have fallen, when this body of water, with its 164 square miles of surface, its richly forested shores, picturesque islands, and distant mountain views will become one of the beautiful lakes of the tropics. Let us hope that birds will discover its charms; that Herons will nest upon its islets and Ducks winter upon its waters. At present few birds are seen, either from a steamer in crossing it or from a train on its shores. Two or three Brown Pelicans, a few Cormorants, and a flock of about fifty Ducks (Tree Ducks) completes the list of those observed.

Just before crossing the Chagres River one passes through some really fine tropical forest, with towering walls of rich and varied vegetation rising from quiet pools of water which mirror the countless leaf-forms above. Here I saw two Yellow-breasted Toucans, flapping and sailing their slow way, a pair of large Parrots, and two maroon-colored Tanagers—just a suggestion of the life which these forests doubtless contain.

Although the journey from the Atlantic to the Pacific side of the Isthmus is only 50 miles, this narrow neck of land has continental attributes. It has its continental divide, which, in spite of its low altitude of some 300 feet, serves to create a marked difference in the climate of the northern and southern slopes of the Isthmus, giving to the former a much heavier rainfall, and, consequently, more luxuriant vegetation than is found on the southern slope. Before reaching the summit of the divide we had entered the clouds and a downpour of rain shut out the view, but as we went down the southern slopes we left the clouds and rain behind to find a clear evening in Panama.

Red Cross duties, connected with the extremely active Canal Zone Chapter and with the Panama Red Cross, left no time for bird-study of even the most casual kind, and the only birds seen in and about Ancon and Balboa were those which could not well be avoided. The surroundings of the Tivoli Hotel at Ancon are not such as to attract many birds. Swifts (*Chætura*), Martins, Barn Swallows, Turkey Buzzards, and Black Vultures were familiar aerial forms. At sunrise each morning a Banded Ant-bird (*Formicarius*) sounded his rolling call a few times and was not heard for the rest of the day. A Wren (*Troglodytes*), resembling our House Wren more nearly in appearance than in song, was common, and a Summer Tanager, whose identity was revealed by its characteristic *chicky-tucky-tucky*, was seen day after day in a tree near my window. This tree also yielded a Woodpecker (*Centurus*) and a Yellow Warbler, which may or may not have been our *Dendroica æstiva*.

Blue Tanagers, a Robin-like Thrush, the Yellow-breasted Kingbird (*Tyrannus melancholicus*), a number of graceful Fork-tailed Flycatchers, and the previously mentioned Paroquets were the birds which more than met me halfway about Ancon.



A CENTRAL AMERICAN CUCKOO (*Tapera nevia*)
"The mournful whistle of a Cuckoo (*Tapera nevia*) aroused a hundred associations."

It must be remembered that the rainy season was just drawing to a close and that birds, as a whole, were not in song. In March or April many additional species would doubtless have announced their presence, while one who was looking for birds would unquestionably find the gardens and tree-lined drives of Ancon and Balboa Heights profitable hunting-grounds.

The abundance of vegetation about the attractive homes of these towns offers many tropical birds their first opportunity to establish friendly associations with North American bird-lovers.

The bird student in the Canal Zone, is not, however, restricted to those parts of the country which have come completely under the dominion of man. From my window in the Tivoli I looked out over the green savannas to the forested foot-hills, accessible and promising grounds, where one may study tropical bird-life under particularly favorable conditions. A visit to the ruin of old Panama, distant about 9 miles, possesses not alone abundant historic interest, but the vegetation which has sprung up in the fallen walls of this ancient city, and which surrounds its site, is filled with birds. I passed an hour there on the afternoon of November 10 with Capt. O'Connell, a former Museum associate, and now in the coast artillery at Ft. Amador. It was an exquisitely beautiful evening, with a richly hued sunset, followed by that marvelous after-glow which so often marks the close of a tropical day. On the broad mud-flats exposed by the low tide there were numerous shore-birds; Laughing Gulls gleaned at the water's edge, and over the Bay of Panama were long lines of Pelicans, evidently headed for their roosting-places.

As the sun fell, the birds in the vegetation about us became more active, and, in spite of the season, the air for a short time was vocal with calls and songs. I recognized the voices of many old friends. There was the chatter of Flycatchers (*Tyrannus melancholicus* and *Myiozetetes*), the loud, ringing whistle of a large Wren (*Thryothorus*), breaking with startling suddenness from a nearby thicket, and stopping as suddenly; there was the mournful whistle of a Cuckoo (*Tapera navia*) which aroused a hundred associations, the thin twitter of dozens of Blue Tanagers, and the shrill cries of many Paroquets exploring the ruins as though house-hunting. There were scores of Seed-eaters and small flocks of Ground Doves (*Chaemepelia rufipennis*) along the roadside; Hawks, Caracaras, Black Vultures, Swallows, and a single Collared Swift (*Streptoprocne*) in the air; Hummers buzzed actively about us, everywhere there was movement and a sense of teeming life.

As we returned to Ancon in the short twilight, the sky was filled with an amazing number of Nighthawks; they were present by thousands, feeding at first high in the air and coming nearer the ground as the light failed. In strong contrast to their darting, erratic flight was the steady progress of a flock of some fifty large Parrots which passed overhead, bound for their home in the forest.

An Evening with Birds in Florida

By J. W. LIPPINCOTT, Bethayres, Pa.

EVEN in Florida, winter is the time of unsettled weather. In the northern part it may be 80 degrees in the shade one day and 20 the next. Nevertheless there are quantities of birds always at hand. At dawn the Mockers awaken the world by that harsh cry which every other Mockingbird in Florida seems to repeat until the woods resound. Instantly Jays are heard, Red-winged Blackbirds begin to fly, Flickers, Sapsuckers and other Woodpeckers commence to feed; the Robins, flying in flocks, seek the edges of lakes where gall-berries are ripening, and from all kinds of impossible places, like bramble thickets, palmetto beds, and swamp tussocks comes a host of other birds. All are busy until the sun is well up, then one after another vanishes—where one rarely knows—until, just before night, the rush for roosting-places comes.

Evening in Florida after a pleasant, sunny day is intensely interesting. Let us say that one is moored in a boat in some grass- or lily-studded lake that has a live-oak hummock on one side and on the other, grassy flats, and then the pine-covered sand-hills. The sun is very low, and the reflections in the quiet water clear-cut and many-colored.

Tree Swallows have just been dipping their bills for the last hasty drink, but now there is a hush—no bird is in sight. Then on the horizon appear several dots; they come nearer steadily, but are high. Eight Little Blue Herons, two in the whitish plumage of the young bird, pass westward. To the flats now drops a noisy band of Red-wings, and then silently a flock of Meadowlarks, the latter spreading among the grass instead of in the sedge clumps. Robins that have been feeding on sumac berries on a little island hurry away as if making room for a dozen Doves that noisily alight in a clump of live oaks. From the hummock comes the insistent rasp of Brown Thrashers which are worried by some gray squirrels overhead. Here, too, Quail are whistling—not the *bob-white* of summer, but a more plaintive rallying call. Two Red-tailed Hawks are already roosting in the moss-festooned live oaks, but they make no sound.

A mass like a cloud appears over the trees, *cah, cah-hah, cah-cah*. It is the Crow army returning to the great roost on Sorghum Hill, near where the Turkey Buzzards congregate for the night, on dead trees over the river—446 Florida Crows—the evening before it was 440—flapping along in a straggling column at least a mile long. They look at everything they pass, some sportively swoop at a Sparrow Hawk, others circle and drop low to see what is going on among the Meadowlarks. Curiosity impels others to follow, but they see the main column flying steadily on, and so quickly rejoin it. Now and then a Crow drops back to talk to one far behind—*cah-cah, cah-hah*. The column fades away toward the setting sun, and the even swish of nearly a thousand wings is no longer heard.

Doves in twos and threes, or singly, are now hurrying to the island. The early ones hunted roosting-places in the live oaks, but those that come now simply drop into the short grass or squat on the mud by the water, their wings whistling as they hover for an instant. Killdeer Plover suddenly cry out from the direction of the flats. One comes to the island and settles there with contented little noises; another, hunting him, circles with plaintive calls and then returns to the flats.

In the water beside the boat appears a little Grebe. He is startled and dives, leaving scarcely a ripple. Other Grebes are diving among the sedges where the bass are chasing minnows and the frogs are croaking. Nearer to the boat are several hylas, piping away as they do farther north in April. As if in answer to their call, there comes a harsh cry, and over the water flops a Great Blue Heron, followed some distance behind by its mate. The Herons alight in the shallow water near the island, stand awhile stiffly erect, watching for enemies, and then lower their heads for the evening hunt.

Now is the time for the Ducks to come to roost in the partly submerged sedge clumps. The sun has gone, and only the red glow remains. Against this there soon appear black specks high over the trees. They grow rapidly larger. There is a whistle of wings, a roar of water as they alight, and there, near the sedge clumps, are a dozen Black Ducks, quacking to each other in truly barn-yard fashion. Others swing in from the same direction, and all swim into the shadow of the water-weeds.

Now and then a pair of Wood Ducks comes from the west. If the drake sees the boat, he gives a warning cry which other drakes already in the sedge clumps repeat and the Killdeer Plover echo. The sounds die down. Is the fun over? No! With swishing wings and startled quacks seven Mallards stop themselves in the act of alighting beside the boat. Probably they had been disturbed in some other roosting-place and had come too late to see clearly. Now they skim away to some other lake, leaving behind them a feather or two floating on the water.

Surely now it is time to leave. A Barred Owl is hooting in the woods, Screech Owls and night-loving flying squirrels have spotted the boat from the edge of the hummock and are noisy in their disapproval; but something more is winging its way over the water. In the almost vanished glow it dips and circles until almost overhead—a bat.



The Great Horned Owl

By F. N. WHITMAN, Chicago, Ill.

With photographs by the Author

A FEW pieces of down and some feathers on the side of a hill first drew my attention, and when a short search presently revealed more feathers caught in the ragged edges of an old broken-off oak tree, my expectations quickly mounted. I immediately aimed a few handy sticks at the tree-top and, at the second throw, with startling suddenness, the huge form and spreading wings of a Great Horned Owl emerged. Poising a moment threateningly, it then swerved up and away, disappearing in the woods.

Thrilling at the discovery of the old Owl's nest, I accomplished the 25-foot climb in feverish haste, a final swing landing me in a crotch, looking down into the hollow top of the tree. From the 20-inch cavity below, two young Owls, fluffy white balls about twelve days old, gazed back in startled amazement. They had plainly been well fed, for in a circle around them were strewn the remains of five birds, a ground squirrel and a rabbit, the birds including, a Robin, two Yellow-bellied Sapsuckers, and two Flickers. Surely here was food sufficient at one time even for hungry young Owls. On my numerous visits to the nest during the three following weeks, there was always a surprise in the variety of new prey these ravenous birds had brought home. Song-birds, Rails, Herons, rodents, and the like, were found, usually with the heads eaten off, as the Owls seemed generally to start with the front end. One Long-eared Owl was also found, testimony of cannibalistic habits.

Covered with white down, with head, beak, and talons much out of proportion to the body, and their eyes closed, newly hatched Owls are grotesque objects. They are fed at short intervals with small bits from the prey at hand, including feathers, entrails and all, and on this diet grow rapidly, attaining at the age of four weeks almost adult size, although not yet fully feathered. They are soon encouraged to help themselves from the food available, and their legs, at first very weak, in a short time gain strength enough to support them.

While one of the parents is attending to household duties the other is foraging for more food. In the dead of night, noiselessly, like a ghost, it sweeps along through the trees. It may be mentioned, that, because of their very soft feathers, Owls make not a sound in flight, and so can approach their prey without causing alarm; and when the present pair of birds later ferociously attacked me, I had not the slightest warning until they struck me like a discharge from a catapult. With a wing-spread of between four and five feet, large and powerful, dauntless in courage, they prove dangerous antagonists for the intruder who meddles in their home affairs, as will presently be seen.

During the time that I spent up in the tree photographing the young, the old birds hooted their chagrin and anger from nearby. Growing bolder, they

presently flew into trees closer at hand, to observe what was going on at their nest, sometimes perching low down, sometimes in the very top of the neighboring pines. Their long-drawn doleful hooting, interspersed with subdued cries or an occasional grunt, was accompanied by the ruffling of their feathers and the snapping of their beaks. Thus do they show their anger. When hooting they looked straight ahead, apparently lending their entire attention to the operation, and their white chin-patches seemed to expand, giving them a very peculiar appearance.

I was placing my subjects for a last picture, when, suddenly prompted to look up, I beheld one of the old birds only a few yards off, sailing directly to-



YOUNG HORNED OWLS A MONTH OLD

Their horns are quite distinct. Within a week or ten days they will leave the nest

ward me. But instead of attacking me, as it probably at first intended, it lit on a limb within a distance of 6 feet. There it perched, almost within arm's reach, long ears erect, the powerful talons of its stout, feathered legs gripping and contracting with readiness for action, the large, relentless eyes fixing me with deadly intentness. Unfortunately, the camera was tied in place for photographing the nest, and as it was thus out of commission for the occasion, I had to sit astride a limb content to observe and wait. A hostile move toward the young would have invited vengeance, but, no further provocation being offered, the bird presently glided away.

This close introduction apparently having lessened the awe in which it

had held its visitor, it now perched still nearer by, where it was joined by its mate, the two sitting statue-like, side by side, but a few yards distant. Having obtained satisfactory photographs, I was now ready to descend. I was about half-way down when something struck me a terrific blow just back of the right ear, nearly breaking my grip. It was a moment before I could realize what had hit me, so dazed was I by the force of the blow. Hardly had I recovered my hold when another similar blow caught me on the left cheek, leaving a deep gash beneath the eye, and when I finally reached *terra firma* I was cut and bleeding.

A visit to the nest the following day found the Owls on hand, anticipating trouble, and perceptibly more ready for an encounter after the previous day's experience. On the other hand, I was also on the alert, prepared to protect myself in an emergency. Climbing the tree to and from the nest proved most hazardous, as the Owls seemed to realize fully my awkward position, and to take this act, therefore, as the signal for an attack. During my short observation of the nest the birds hooted and snapped loudly, and as I started down one of them launched out for me. In a long swift swoop, on horizontal pinions, it came on down, the great yellow eyes holding me with a sinister, ominous intensity. The next instant, hugging close to the trunk, I swung up an arm, as if to strike, simultaneously ducking. Checked by this feint, the Owl passed, missing its aim by a few inches, and before its mate could follow up the opportunity, I slipped to the ground. Quick action was demanded, for as one bird came from one direction, the other would follow up the attack closely from the opposite side.

The blow, in every case aimed at the head, caused a curious numbing sensation; the bird seemed to strike in full collision, yet at the same time to pass. While the main force of the stroke apparently came from the beak, the claws left their deep unmistakable furrows. Indeed, it was necessary to keep a careful watch, when in the proximity of the nest, as the least lapse of vigilance was sure to result unpleasantly. The eyesight of Owls, contrary to popular opinion, is sufficiently keen, even in bright daylight, and the sagacity with which the birds would time their attacks merits admiration.

One other incident of the day was of particular interest. One of the Owls was perched in the top of a pine watching me jealously as I handled the young. Suddenly a body shot downward out of the sky, swerving past the Owl's head with such terrific velocity as to produce a sound like a small clap of thunder. It was an uneasy glance that the wise old bird cast upward, as it apprehended the swoop of the Cooper's Hawk just in time to prevent being struck. The Hawk evidently had perceived the Owl's unwonted pre-occupation, and had been tempted to startle it, the result probably being a more or less unusual occurrence in the life of these birds.

Bird-Lore's Advisory Council

WITH some slight alterations, we reprint below the names and addresses of the ornithologists forming BIRD-LORE'S 'Advisory Council,' which were first published in BIRD-LORE for February, 1900.

To those of our readers who are not familiar with the objects of the Council, we may state that it was formed for the purpose of placing students in direct communication with an authority on the bird-life of the region in which they live, to whom they might appeal for information and advice in the many difficulties which beset the isolated worker.

The success of the plan during the eighteen years that it has been in operation fully equals our expectations. From both students and members of the Council we have had very gratifying assurances of the happy results attending our efforts to bring the specialist in touch with those who appreciate the opportunity to avail themselves of his wider experience.

It is requested that all letters of inquiry to members of the Council be accompanied by a stamped and addressed envelope for use in replying.

NAMES AND ADDRESSES OF MEMBERS OF THE ADVISORY COUNCIL

UNITED STATES AND TERRITORIES

- ALASKA.—Dr. C. Hart Merriam, 1919 16th St., N. W., Washington, D. C.
ARIZONA.—Harriet I. Thornber, Tucson, Ariz.
CALIFORNIA.—Joseph Grinnell, University of California, Berkeley, Calif.
CALIFORNIA.—Walter K. Fisher, Palo Alto, Calif.
COLORADO.—Dr. W. H. Bergtold, 1159 Rose St., Denver, Colo.
CONNECTICUT.—J. H. Sage, Portland, Conn.
DELAWARE.—S. N. Rhoads, Haddonfield, N. J.
DISTRICT OF COLUMBIA.—Dr. C. W. Richmond, U. S. Nat'l. Mus., Washington, D. C.
FLORIDA.—Frank M. Chapman, Am. Mus. Nat. History, New York City.
FLORIDA, Western.—R. W. Williams, Jr., Tallahassee, Fla.
GEORGIA.—Dr. Eugene Murphy, Augusta, Ga.
ILLINOIS, Northern.—B. T. Gault, Glenellyn, Ill.
ILLINOIS, Southern.—Robert Ridgway, U. S. National Museum, Washington, D. C.
INDIANA.—A. W. Butler, State House, Indianapolis, Ind.
IOWA.—C. R. Keyes, Mt. Vernon, Iowa.
KANSAS.—University of Kansas, Lawrence, Kans.
KENTUCKY.—A. C. Webb, Nashville, Tenn.
LOUISIANA.—Prof. George E. Beyer, Tulane University, New Orleans, La.
MAINE.—A. H. Norton, Society of Natural History, Portland, Maine.
MASSACHUSETTS.—William Brewster, Cambridge, Mass.
MICHIGAN.—Prof. W. B. Barrows, Agricultural College, Mich.
MINNESOTA.—Dr. T. S. Roberts, Millard Hall, University of Minn., Minneapolis, Minn.
MISSOURI.—O. Widmann, 5105 Morgan St., St. Louis, Mo.
MONTANA.—Prof. J. M. Elrod, University of Montana, Missoula, Mont.
NEBRASKA.—Dr. R. H. Walcott, University of Nebraska, Lincoln, Neb.
NEVADA.—Dr. A. K. Fisher, Biological Survey, Dept. of Agr., Washington, D. C.
NEW HAMPSHIRE.—Dr. G. M. Allen, Boston Soc. Nat. Hist., Boston.

NEW JERSEY, Northern.—Frank M. Chapman, Am. Mus. Nat. History, New York City.
 NEW JERSEY, Southern.—Witmer Stone, Academy Natural Sciences, Philadelphia, Pa.
 NEW MEXICO.—Dr. A. K. Fisher, Biological Survey, Dept. of Agr., Washington, D. C.
 NEW YORK, Eastern.—Dr. A. K. Fisher, Biological Survey, Washington, D. C.
 NEW YORK, Western.—E. H. Eaton, Hobart College, Geneva, N. Y.
 NORTH DAKOTA.—Prof. O. G. Libby, University, N. D.
 NORTH CAROLINA.—Prof. T. G. Pearson, 1974 Broadway, New York City.
 OHIO.—Prof. Lynds Jones, Oberlin College, Oberlin, Ohio.
 OKLAHOMA.—Dr. A. K. Fisher, Biological Survey, Dept. of Agr., Washington, D. C.
 OREGON.—W. L. Finley, Milwaukee, Ore.
 PENNSYLVANIA, Eastern.—Witmer Stone, Acad. Nat. Sciences, Philadelphia, Pa.
 PENNSYLVANIA, Western.—W. E. Clyde Todd, Carnegie Museum, Pittsburgh, Pa.
 RHODE ISLAND.—H. S. Hathaway, Box 1466, Providence, R. I.
 SOUTH CAROLINA.—Dr. P. M. Rea, Charleston Museum, Charleston, S. C.
 TENNESSEE.—Albert F. Ganier, Nashville, Tenn.
 TEXAS.—H. P. Attwater, Houston, Texas.
 UTAH.—Prof. Marcus E. Jones, Salt Lake City, Utah.
 VERMONT.—Prof. G. H. Perkins, Burlington, Vt.
 VIRGINIA.—Dr. W. C. Rives, 1723 I Street, Washington, D. C.
 WASHINGTON.—Samuel F. Rathburn, Seattle, Wash.
 WEST VIRGINIA.—Dr. W. C. Rives, 1723 I Street, Washington, D. C.
 WISCONSIN.—H. L. Ward, Public Museum, Milwaukee, Wis.

CANADA

ALBERTA.—G. F. Dippie, Calgary, Alta.
 BRITISH COLUMBIA.—Francis Kermode, Provincial Museum, Victoria, B. C.
 MANITOBA.—Ernest Thompson Seton, Greenwich, Conn.
 NOVA SCOTIA.—Harry Piers, Provincial Museum, Halifax, N. S.
 ONTARIO, Eastern.—James H. Fleming, 267 Rusholme Road, Toronto, Ont.
 ONTARIO, Western.—W. E. Saunders, London, Ont.

MEXICO

E. W. Nelson, Biological Survey, Dept. of Agr., Washington, D. C.

WEST INDIES

C. B. Cory, Field Museum, Chicago, Ill.

GREAT BRITAIN

Clinton G. Abbott, Rhinebeck, New York.

The Migration of North American Birds

SECOND SERIES

VIII. RAVENS

Compiled by Harry C. Oberholser, Chiefly from Data in the Biological Survey

AMERICAN RAVEN

Some form of the common American Raven occupies nearly all of North America and Mexico. As a species it is chiefly resident, though during autumn and winter it wanders about more or less, especially in the United States; yet it does not pass much to the south of its breeding range, and its movements are not sufficient to constitute a regular migration. From the extreme northern section of its range it withdraws in part during the coldest weather, yet even as far north as Banks Land, Canada, it sometimes remains all through the long Arctic winter night. It is apparently local while nesting, and there are large areas within the limits of its breeding range where it scarcely ever appears at this season; in fact, it is rare at any time throughout the eastern half of the United States. The following four subspecies of the Raven are now known from North America. To correlate these with the A. O. U. Check-List, combine the first two for the American Raven, and the last two for the Northern Raven.

The American Raven (*Corvus corax sinuatus*) inhabits middle western North America and breeds north to southwestern Mackenzie; west to British Columbia, northeastern Washington, western Wyoming, southwestern New Mexico, southwestern Arizona, and Tepic, Mex.; south to northern Honduras; and east to Vera Cruz in Mexico, central Texas, eastern Kansas, and central northern North Dakota.

At Forestburg, S. D., three years' observation gives an average autumn arrival of September 26, with September 12, 1904, as the earliest date; and at the same place the latest spring record is April 23, 1904. At Aweme, Manitoba, three years give an average fall arrival of October 17, with an earliest date of October 10, 1898. At Margaret, Manitoba, three years' observation gives September 28 as the average autumn appearance, with September 14, 1909, as the earliest date. At the same locality the latest spring record was March 21, 1912.

The Clarion Island Raven (*Corvus corax clarionensis*) breeds in the southwestern United States, north to central northern Oregon; west to western California and western Lower California; south to the Revillagigedo Islands, Mexico; east to southeastern Arizona, central Idaho, and northeastern Nevada.

The Northern Raven (*Corvus corax principalis*) breeds in northern North America, north to northern Greenland, Banks Land, and the northern coast of Alaska; west to the western coast of Alaska, the Aleutian Islands,

and British Columbia; south to western Washington, northern Mackenzie, and northern Quebec; and east to Greenland.

The Southeastern Raven (*Corvus corax europhilus*) breeds in the eastern United States and southeastern Canada; north to southern Labrador and central Ontario; west to Minnesota and Arkansas; south to Tennessee, north central Alabama, and northwestern South Carolina; and east to western North Carolina, New Jersey, Maine, Nova Scotia, and Newfoundland.

It was noted at Clinton, Ark., on April 9, 1889; in Fulton County, Ky., October 3, 1887; Mendosa, Ill., October 23, 1892; Trout Lake, Mich., November 12, 1896; Grand Rapids, Mich., April 8, 1890; Unity, Wis., October 30, 1914, and Oberlin, Ohio, November 21 and 25, 1896. At Wauseon, Ohio, seven years' record gives an average autumn arrival of November 1, with an earliest date of October 10, 1890, and an average of departure in the spring of March 21, with a latest record of April 11, 1891.

WHITE-NECKED RAVEN

The White-necked Raven (*Corvus cryptoleucus*) is even more sedentary than the American Raven. Its breeding range lies in the southwestern United States and Mexico, and extends north to southwestern Nebraska, central northern Colorado, and northwestern New Mexico; west to central Colorado, western New Mexico, southeastern Arizona, and Chihuahua; south to Michoacan, Mex., and Guanajuato, Mex.; and east to Tamaulipas, central Texas, and western Kansas. It is apparently extinct in Kansas and Nebraska. All California and Wyoming records are now regarded as erroneous or very doubtful, and these states are, therefore, omitted from its range.

Notes on the Plumage of North American Birds

FIFTY-SECOND PAPER

By FRANK M. CHAPMAN

(See Frontispiece)

American Raven (*Corvus corax sinuatus*, Fig. 2). The males, females, and young of the North American Ravens are essentially alike in color. When it leaves the nest, the young bird has the body plumage of a duller black than the adult, that of the underparts especially being dull and brownish. This body plumage changes at the post-juvenal molt, and birds in their first winter are indistinguishable from the adults. The juvenal American Raven has a slight greenish gloss on the throat and upper breast, the remainder of the underparts being dull, lusterless brownish black instead of glossy, slightly greenish black; the feathers of the chin are pointed and hair-like, as in the adult, but the lower throat lacks the characteristic elongated, narrow, glossy purple-black feathers.

Bird-Lore's Nineteenth Christmas Census

THE highest number of species recorded in this census in the northern and middle Atlantic States is forty-six by Orient, Long Island; in the south, fifty-five by Fort Pierce, Fla.; in the Mississippi Valley, forty-four by St. Louis; and in the west, sixty-one by San Francisco, California (Santa Barbara, 110, too late for insertion, and Los Angeles not heard from).

The present fall and early winter have been exceptionally mild and open. This condition is reflected in the various species which the Census reports in the east have caught north of their ordinary winter range. The Osprey, for instance, is recorded from Sandy Hook, and Morristown, N. J.; the Red-winged Blackbird from Connecticut, near the 43d parallel of latitude in New York, and a flock of twenty-two at Englewood, northern New Jersey; Pine Warbler from New Jersey; Maryland Yellow-throat on Long Island; Cape May Warbler in western New York; and Redstart in Pennsylvania!

Of erratic northern wanderers, the Pine Grosbeak shows the most definite 'flight.' In New England it occurs on the five Maine and New Hampshire reports (average twenty individuals), and is mentioned by four of the nineteen from Massachusetts and Connecticut (average five). It is also mentioned in Rhode Island.

Several eastern observers have found the Hairy Woodpecker more numerous or more generally distributed than usual this season—let us see if the Census contributes anything on this point. In the 1917 Census it occurred in thirty-two per cent of the New England reports (average 1.9 individuals), and in forty per cent of those from New York to Pennsylvania (average 1.4); in 1918 it is mentioned by sixty-three per cent of the New England reports (average 2.1) and by forty-five per cent of the latter (average 2.2).

Lack of space has made it necessary to 'cut down' the printed Census wherever possible, and to omit certain reports for no other reason than that others from the same vicinity were more complete. We wish especially to thank those whose reports have not been published, for what they have contributed to the competition, and to wish them better luck next time.

Quebec, P. Q. (Bergerville, Ste. Foye, Bridge, Sillery, Wolfe's Cove).—Dec. 22; 9 A.M. to 1 P.M. and 2 P.M. to 4 P.M. Cloudy; 1 ft. of snow; wind east, very light; temp. 37° at start, 39° at return; light rain in afternoon. Blue Jay, 1; Pine Grosbeak, 10; Redpoll, 50; Red-breasted Nuthatch, 1; Chickadee, 12; Acadian Chickadee, 3. Total, 6 species, 77 individuals.—HARRISON F. LEWIS.

Arnrior, Ont.—Dec. 25; 9 A.M. to 5 P.M. Overcast all day, with light snow morning and evening; 6-in. snow; wind northeast to north, light; temp. min. 20°, max. 25°. Fifteen miles on foot. Observers separate. Ruffed Grouse, 1; Large Hawk or Eagle (unidentified), 1; Hairy Woodpecker, 3; Downy Woodpecker, 5; Arctic Three-toed Woodpecker, 1; Evening Grosbeak, 52; Pine Grosbeak, 9; Pine Siskin, heard; Snow Bunting, heard; Brown Creeper, 3; White-breasted Nuthatch, 5; Black-capped Chickadee, 74. Total, 12 species, 154+ individuals. Seen recently: Dec. 15, American Golden-eye Duck, 4; Northern Shrike, 2; Dec. 22, Blue Jay, 3.

The Pine Siskins mentioned above were heard while the observer was in a grove of evergreens and it was impossible to see the birds. The Snow Buntings were heard calling above the town all last night. A blinding snowstorm was raging at the time, and what induced the birds to fly at night is not easily conjectured. A similar occurrence with this species was observed on the night of Nov. 28. We have never heard of Snow Buntings flying at night before.

Red-breasted Nuthatches are entirely absent here this winter, but Arctic Three-toed Woodpeckers have been unusually common. Between Oct. 25 and Nov. 24, many Hudsonian Chickadees passed here.—CHARLES MACNAMARA and LIGUORI GORMLEY.

London, Ont., and vicinity.—Dec. 21; 2.30 to 5.30 P.M., temp. 54° at start, 48° at finish (weather exceptionally mild). Wind light southeast; light rain falling most of the time. Combined list of three parties working separately.

Herring Gull, 2; Sparrow Hawk, 1; Hairy Woodpecker, 2; Downy Woodpecker, 7; Blue Jay, 3; American Crow, 30; American Crossbill, 5 (flock flying overhead, identification not positive); Goldfinch, 1; Tree Sparrow, 3; Junco, 20; Song Sparrow, 1; Cardinal, 1; Northern Shrike, 1 (third year in succession that a Shrike has been found in the same spot on our census trip); Brown Creeper, 5; White-breasted Nuthatch, 10; Black-capped Chickadee, 39; Golden-crowned Kinglet, 2 (scarce this year); Robin, 1. Total, 18 species, 134 individuals.

The following have also been reported from this district this winter: Redpoll (flock of 5), Pine Grosbeak (flock of 8), Evening Grosbeak (flock of 6; also a few odd ones at other times), Snowy Owl, Bronzed Grackle (pair). No ducks this winter, weather too mild and too much open water. We also understand that in Toronto a number of Hawk Owls and Barred Owls have been brought in to the taxidermists.—C. G. WATSON, J. R. McLEOD, E. DALY, MR. and MRS. J. C. MIDDLETON. (McIlwraith Ornithological Club.)

Bucksport, Maine.—Dec. 27; 8 A.M. to 1 P.M. Clear; 4 in. of snow; wind northeast, very light; temp. 18° at start, 22° at return. Seven miles on foot. Herring Gull, 1; Hairy Woodpecker, 3; Northern Downy Woodpecker, 1; Pine Grosbeak, 14; White-breasted Nuthatch, 1; Black-capped Chickadee, 8; Golden-crowned Kinglet, 3; Canada Ruffed Grouse is a resident, but was not seen on this trip. Total, 7 species, 31 individuals.—GEORGE L. BLODGET.

Lewiston, Maine.—Dec. 20; 10 A.M. to 1.30 P.M. Clear; 1 in. of snow; wind southwest, very light; temp. 28° to 36°. American Crow, 2; Pine Grosbeak, 34; Evening Grosbeak, 1; Redpoll, 20; White-breasted Nuthatch, 1; Chickadee, 1. Total, 6 species, 59 individuals.—C. D. FARRAR and L. E. FARRAR.

Plaistow, N. H.—Dec. 27; all day. Fair, partly cloudy; wind northwest, light; temp. 28°; trace of snow on ground. Ruffed Grouse, 2; Hairy Woodpecker, 1; Blue Jay, 2; American Crow, 3; Pine Grosbeak, 8; Tree Sparrow, 6; Brown Creeper, 1; Black-capped Chickadee, 50. Total, 8 species, 73 individuals. Goldfinches (100) and Redpolls (50) were seen the previous day by Wm. A. Denker.—KEBLE PERINE, HASKELL B. CURRY and WM. A. DENKER.

Wilton, N. H.—Dec. 25; 8.30 to 11.30, A.M.; 2.30 to 4 P.M. Cloudy; no snow; no wind, temp. 40° to 50°. Ruffed Grouse, 1; Hairy Woodpecker, 1; Downy Woodpecker, 2; Blue Jay, 3; Starling, 7; Pine Grosbeak, 39; Junco, 1; White-breasted Nuthatch, 1; Black-capped Chickadee, 6. Total, 9 species, 61 individuals. Three weeks ago I saw 3 Evening Grosbeaks and a Shrike.—GEORGE G. BLANCHARD.

Nashua, N. H. (into Merrimack and back).—Dec. 28; 8.15 A.M. to 3.45 P.M. Clear at start, becoming cloudy, with the sun shining through intermittently; ½ in. powdery snow; wind northwest, light; temp. 25° at start, 28° at return. Ten miles on foot. Herring Gull, 1; American Merganser, 24; Ruffed Grouse, 1; Blue Jay, 3; American Crow, 2; Starling, 116; Evening Grosbeak, 3; Pine Grosbeak, 4; Goldfinch, 2; Tree Spar-

row, 2; Slate-colored Junco, 2; Black-capped Chickadee, 21. Total, 12 species, 181 individuals.—MANLEY B. TOWNSEND.

Bennington, Vt.—Dec. 27; 10.30 A.M. to noon. (Two-mile auto drive into mountains and a walk of $\frac{1}{2}$ mile at end of drive and auto back.) Clear with low-lying clouds at horizon; ground bare in lowlands, $\frac{1}{2}$ in. snow in mountains; no wind; temp. 30°; observers together. Hairy Woodpecker, 1; American Crow, 2; Blue Jay, 6; Starling, 3; Snow Bunting, 14; Northern Shrike, 1; Brown Creeper, 1; White-breasted Nuthatch, 2; Chickadee, 5. Total, 9 species, 35 individuals.—DR. and MRS. LUCRETIOUS H. ROSS.

Devereux to Marblehead Neck, Mass. (and return).—Dec. 26; 12 to 4 P.M. Light snowstorm; wind west, light; ground bare; temp. 34°. Holboell's Grebe, 1; Horned Grebe, 9; Black-backed Gull, 5; Herring Gull, 50; Double-crested Cormorant, 4; American Merganser, 10; Red-breasted Merganser, 15; American Golden-eye, 12; Old-squaw, 23; Ruffed Grouse, 1; Ring-necked Pheasant, 1; American Crow, 7; Song Sparrow, 1; Chickadee, 2. Total, 14 species, 141 individuals.—ALICE O. JUMP and LIDIAN E. BRIDGE.

Wyoming through Middlesex Fells to West Medford, Mass.—Dec. 22; 8 A.M. to 1 P.M. Cloudy; ground bare; wind, snow light; temp. 34°. Herring Gulls, 75; Black Duck, 250; Ring-necked Pheasant, 2; Hairy Woodpecker, 2; Downy Woodpecker, 1; Blue Jay, 10; American Crow, 21; Starling, 30; Goldfinch, 7; Pine Siskin, 15; Song Sparrow, 1; Northern Shrike, 1 (with Junco in claws); White-bellied Nuthatch, 1; Black-capped Chickadee, 27. Total, 14 species, 443 individuals.—EDMUND and LIDIAN E. BRIDGE.

Middlesex Fells, and Pine Banks, Malden, Mass.—Dec. 27; 9.10 A.M. to 12.45 P.M. Fair to cloudy; ground covered by flurry of snow; wind west, light; temp. 21° at start, 27° at return. Movements made by automobile to cover the Fells. Observers together. Herring Gull, 2; Merganser, 15 (3 females); Black Duck, 75 (Red-legged); Hairy Woodpecker, 1; Downy Woodpecker, 2; Blue Jay, 5; American Crow, 2; Pine Grosbeak, 17; Goldfinch, 20; Pine Siskin, 10; Brown Creeper, 1; White-breasted Nuthatch, 5; Black-capped Chickadee, 20. Total, 13 species, 175 individuals.—HELEN H. WELLMAN and GORDON BOIT WELLMAN.

Weston, Mass.—Dec. 22; 7.35 to 10.15 A.M.; 1.45 to 3.45 P.M. Cloudy, followed by light rain; wind light, south and southwest. Ground bare; temp. 38° to 50°. Ruffed Grouse, 1; Ring-necked Pheasant, 1; Hairy Woodpecker, 2; Downy Woodpecker, 2; Flicker, 1; Blue Jay, 2; American Crow, 17; Pine Grosbeak, 5 (have seen these several times); Goldfinch, 15; Pine Siskin, 4 (first seen Dec. 13); Tree Sparrow, 12; Junco, 25; Brown Creeper, 1; Red-breasted Nuthatch, 1 (positive identification); Black-capped Chickadee, 12. Total, 15 species, 101 individuals.—WARREN F. EATON.

Leominster, Mass. (Leominster and vicinity).—Dec. 25; 8 A.M. to 4.45 P.M. Cloudy; no snow, no wind; temp. 35°; warm; ponds open. Herring Gull, 25; Sheldrake, 1; Pheasant, 2; Hairy Woodpecker, 1; Downy Woodpecker, 2; Blue Jay, 2; American Crow, 5; White-breasted Nuthatch, 2; Chickadee, 3. Total, 9 species, 43 individuals. (Six Evening Grosbeaks (males) arrived here Dec. 10, and have been seen nearly every day since, but I was unable to locate them Dec. 25.)—EDWIN RUSSELL DAVIS.

Holyoke, Mass. (vicinity of Mt. Tom Range).—Dec. 25; 9 A.M. to 2 P.M. Sky overcast; intermittent mist and rain; ground bare of snow; little or no wind from the northwest; temp. 35° at start, 42° at return. Seven to eight miles on foot, observers together. Ring-necked Pheasant, 1; Ruffed Grouse, 4 (one flock); American Goshawk, 1; Hairy Woodpecker, 1; Downy Woodpecker, 1; Blue Jay, 4; American Crow, 15; Starling, 85 (one flock); Pine Grosbeak, 5 (one flock); Goldfinch, 25 (one flock); Tree Sparrow, 12 (one flock); Brown Creeper, 1; White-breasted Nuthatch, 1; Chickadee, 14; Robin, 1. Total, 15 species, 171 individuals. Observed recently a Herring Gull and Northern Shrike. The Pine Grosbeaks have been observed this fall half a dozen times in this

vicinity; they are apparently wintering here. Evening Grosbeaks were reported in November from Portland, Conn., and Greenfield, Mass.—ALDEN HEALEY, JOHN L. BAGG, and AARON C. BAGG.

Southampton, Mass.—Dec. 24; Four hours. Cloudy; ground bare; no wind; temp. 48°. Ruffed Grouse, 1; Downy Woodpecker, 2; Arctic Three-toed Woodpecker, 1; Flicker, 1 heard; Blue Jay, 7; American Crow, 3; Pine Grosbeak, 12; Tree Sparrow, 9; White-breasted Nuthatch, 2; Black-capped Chickadee, 9. Total, 10 species, 47 individuals. Hairy Woodpeckers have been seen within a month. The Hairy and Arctic Three-toed Woodpeckers were both found in a strip of young pine killed by forest fire last spring. No possible doubt of Three-toed, as it has been seen several times and the glossy black back, with yellow spot on head, with white line, were seen each time with the naked eye.—MAUDE A. and BESSIE M. GRAVES.

Dighton, Mass.—Dec. 25; 7.30 to 11.30 A.M. Cloudy; ground bare, wind northwest, very light; temp. 34°. Herring Gull, 30; Black Duck, 1; Hairy Woodpecker, 1; Flicker, 2; Blue Jay, 5; American Crow, 35; Starling, 13; Meadowlark, 4; Goldfinch, 350 (very musical; feeding in a weedy field); Tree Sparrow, 30; Song Sparrow, 6; Myrtle Warbler, 15; Brown Creeper, 1; White-breasted Nuthatch, 1; Chickadee, 8. Total, 15 species, 502 individuals.—CHARLES L. PHILLIPS.

New Bedford, Mass.—Dec. 28; 10.30 A.M. to 4 P.M. Clear during forenoon; cloudy with occasional clearing during afternoon; ground bare; wind northeast, light; temp. 32° to 40°. About six miles on foot. Hawk, 2; Downy Woodpecker, 8; Flicker, 8; Horned Lark, 53; Crow, 23; Blue Jay, 4; Starling, 6; Meadowlark, 11; Goldfinch, 22; Tree Sparrow, 50; Song Sparrow, 21; Brown Creeper, 7; Chickadee, 19; Robin, 8. Total, 14 species, 232 individuals.—EDITH F. WALKER.

Mattapoisett, Mass.—Dec. 25; 8 A.M. to 12 M. Mist and fog; ground bare; temp. 42° to 44°; calm to light west wind. Four miles on foot. Holboell's Grebe, 1; Loon, 4; Black-backed Gull, 2; Herring Gull, 3; Merganser, 11; Wood Duck, 1; Golden-eye Duck, 10; Old-squaw, 17; Scoter, 2; White-winged Scoter, 8; Flicker, 2; Blue Jay, 5; American Crow, 3; Starling, 16; Meadowlark, 1; Goldfinch, 39; Tree Sparrow, 16; Junco, 19; Song Sparrow, 6; Myrtle Warbler, 55; Brown Creeper, 2; Chickadee, 36; Robin, 6. Total, 23 species, 265 individuals.—J. E. NORTON SHAW.

Edgartown, Martha's Vineyard, Mass.—Dec. 26; 8.30 to 11.30 A.M. A few birds seen in the afternoon. Cloudy; ground bare; no frost in ground; wind west, light; temp. 37°, falling a few degrees; about 11 A.M. it began to hail, turning to rain and later to snow. Three miles on foot. Loon, 1; Herring Gull, 7; Golden-eye Duck, 9; Kingfisher, 1; Downy Woodpecker, 1; Flicker, 2; Horned Larks, 45; Blue Jay, 3; Crow, 14; Goldfinch, 21; Tree Sparrow, 9; Junco, 9; Song Sparrow, 5; Myrtle Warbler, 11; Pine Warbler, 3; Red-breasted Nuthatch, 2; Chickadee, 7. Total, 17 species, about 150 individuals. Three large flocks of Geese, were reported to me as flying over in the early morning and about 100 Mergansers in a pond. The Kingfisher was by a pond and flew off, sounding his rattle. There is a Mockingbird wintering here, apparently the same one that was here the last two years. Dec. 20, I saw a flock of 21 Snow Buntings.—MONA WORDEN.

Warwick, R. I.—Dec. 25; 9.30 A.M. to 2.30 P.M. Cloudy; ground bare; wind light, southwest; temp. 40° at start, 45° at return. Eight miles on foot. Herring Gull, 58; Red-shouldered Hawk, 1; Flicker, 8; Downy Woodpecker, 1; Blue Jay, 7; Crow, 13; Starling, 600; Meadowlark, 10; Goldfinch, 51; Tree Sparrow, 14; Junco, 46; Song Sparrow 8 (one singing); White-breasted Nuthatch, 1; Chickadee, 28; Robin, 11. Total, 15 species, 857 individuals.—HARRY S. HATHAWAY.

Kingston and coast from Narragansett Pier to Point Judith, R. I.—Dec. 24; 7 A.M. to 4.30 P.M. Overcast in forenoon, rain in afternoon; ground bare; wind east, strong; temp. 36° at start, 47° at return. Holboell's Grebe, 1; Loon, 1; Herring Gull, 11; Ameri-

can Merganser, 3; Red-breasted Merganser, 15; Black Duck, 200; Great Blue Heron, 1; Downy Woodpecker, 1; Northern Flicker, 4; Horned Lark, 60; Blue Jay, 12; American Crow, 17; Starling, 3; Goldfinch, 42; White-throated Sparrow, 3; Tree Sparrow, 32; Slate-colored Junco, 57; Song Sparrow, 6; Cedar Waxwing, 1; Myrtle Warbler, 52; White-breasted Nuthatch, 2; Chickadee, 28; Robin, 2. Total, 23 species, 544 individuals. The following additional species have been found during the last few days: Bob-white, Ruffed Grouse, Barred Owl, Screech Owl, Meadowlark, Purple Grackle, Pine Grosbeak, and Redpoll.—EDWARD H. PERKINS.

South Windsor, Conn.—Dec. 27; 8 A.M. to 3 P.M. Partly cloudy; with occasional flurries of snow; wind west, light; temp. 30°. 10 miles. Herring Gull, 4; Black Duck, 5; Red-shouldered Hawk, 2; Sparrow Hawk, 1; Ruffed Grouse, 1; Screech Owl, 1; Hairy Woodpecker, 3; Downy Woodpecker, 5; Horned Lark, 45; Blue Jay, 8; Crow, 300; Starling, 25; Red-wing Blackbird, 1; Purple Finch, 15; Goldfinch, 20; White-throated Sparrow, 1; Tree Sparrow, 250; Junco, 15; Swamp Sparrow, 1; Song Sparrow, 12; Brown Creeper, 7; White-breasted Nuthatch, 6; Chickadee, 15. Total, 23 species, about 772 individuals.—C. W. VIBERT.

Hartford, Conn.—Dec. 25; 8 A.M. to 2 P.M. Cloudy; light mist; no wind; ground bare; temp. 45°. Sparrow Hawk, 8; Barred Owl, 1; Screech Owl, 1; Hairy Woodpecker, 7; Downy Woodpecker, 5; Blue Jay, 26; American Crow, 40; Starling, 255; Goldfinch, 49; Tree Sparrow, 65; Slate-colored Junco, 103; Song Sparrow, 3; White-breasted Nuthatch, 11; Chickadee, 42. Total, 14 species, 616 individuals.—CLIFFORD M. CASE.

Hartford, Conn. (North from this city beside the Connecticut River several miles, and in the meadows and woodland adjacent to said river).—Dec. 25; 9 A.M. to 4 P.M. Cloudy all forenoon, to clear in afternoon; temp. 38° to 49°; wind light, and changeable throughout the day; ground bare and muddy. following a very heavy rain all night previous. About 10 miles. Herring Gull, 6; Black Duck, 6; Red-shouldered Hawk, 1; Sparrow Hawk, 2; Screech Owl, 1; Hairy Woodpecker, 2; Downy Woodpecker, 5; Horned Lark, (one flock) 50+; Blue Jay, 6; American Crow, 1000+; Starling, 200+; Purple Finch, 10; Goldfinch, 75+; White-throated Sparrow, 1; Tree Sparrow, 300+; Slate-colored Junco, (one flock) 50+; Song Sparrow, (unusually plentiful) 20+; Swamp Sparrow, 1; Brown Creeper, 4; White-breasted Nuthatch, 5; Chickadee, 15+. Total, 21 species, 1760+ individuals. Redpolls, Pine Grosbeak and Pileated Woodpeckers reported here recently, but not seen today.—GEO. T. GRISWOLD.

West Hartford, Conn.—Dec. 22; 7 to 12 A.M. and 3 to 4.30 P.M. Cloudy forenoon, rain afternoon. Light wind; ground bare, temp. up to 55°. Nine mile tramp. Ruffed Grouse, 2; Hairy Woodpecker, 1; Northern Pileated Woodpecker, 2; Blue Jay, 3; American Crow, 300; Starling, 150; Goldfinch, 130; Tree Sparrow, 21; Junco, 25; Song Sparrow, 1; Chickadee, 6. Total, 11 species, 641 individuals.—EDWIN H. MUNGER.

Bristol, Conn. (Edgewood District and northwest quadrant of city).—Dec. 25; 7.20 A.M. to 4.50 P.M. Cloudy with mist and fog on elevated territory; ground bare; trees and bushes dripping; a faint breath of air east; temp. 40° at start, 44° at return. Began to clear at noon; southwest breeze changing to brisk from northwest. and slightly cloudy at return. Hairy Woodpecker 2; Downy Woodpecker, 2; Blue Jay, 19; Crow, 10; Starling, 45; Goldfinch 182+; White-throated Sparrow, 1; Tree Sparrow, 2; Song Sparrow, 2; Winter Wren, 1; White-breasted Nuthatch, 5; Chickadee 25. Total, 12 species, 296 individuals.—ELBERT E. SMITH and FRANK BRUEN.

New London, Conn.—Dec. 26; 9.20 A.M. to 4 P.M. Snowing, very little wind; temp. 38° at start. Seven miles on foot. Holboell's Grebe, 1; Horned Grebe, 9; Herring Gull, 182; Ring-billed Gull, 2; Scaup Duck, 10; Kingfisher, 1; Goldfinch, 1; Tree Sparrow, 23; Song Sparrow, 6; Chickadee, 11. Total, 10 species, 246 individuals.—FRANCES M. GRAVES.

Birdcraft Sanctuary to Fairfield Beach, Conn.—Dec. 25; sunrise to sunset. Fair,

temp. 42°, ground bare. Herring Gull, 300; Red-breasted Merganser, 1; Lesser Scaup, 1; Old-squaw, 70; Surf Scoter, 5; White-winged Scoter, 200; English Pheasant, 2; Sharp-shinned Hawk, 1; Sparrow Hawk, 2; Barred Owl, 2; Kingfisher, 1; Hairy Woodpecker, 3; Downy Woodpecker, 5; Blue Jay, 7; Crow, 9; Starling, 250; Meadowlark, 2; Goldfinch, 14; White-throated Sparrow, 11; Junco, 15; Song Sparrow, 7; Fox Sparrow, 3; Winter Wren, 1; Brown Creeper, 3; White-breasted Nuthatch, 2; Chickadee, 6; Golden-crowned Kinglet, 2; Robin, 3. Total, 28 species, 928 individuals.—FRANK NORAK, Warden.

Norwalk, Conn.—Dec. 24; 7 to 11 A.M. Cloudy; ground bare; wind northeast, very light; temp. 38° to 44°. Horned Grebe, 4; Great Black-backed Gull, 2; Herring Gull, 47; Red-breasted Merganser, 2; Black Duck, 2; Scaup Duck, 34; Golden-eye Duck, 42; Bufflehead Duck, 5; Old-squaw, 36; Great Blue Heron, 1; Downy Woodpecker, 2; Horned Lark, 9; Blue Jay, 4; Crow, 39; Starling, 13; Meadowlark, 4; Snow Bunting, 56; Tree Sparrow, 8; Field Sparrow, 2; Junco, 6; Song Sparrow, 3; Pipit, 1; Brown Creeper, 1; White-breasted Nuthatch, 2; Chickadee, 8. Total, 25 species, 329 individuals. The Pipit was in company with the Horned Larks. Its presence was first detected by its call-note. Later it was observed from about 100 feet.—ARETAS A. SAUNDERS.

Albany, N. Y. (west side of city).—Dec. 25; 9.30 A.M. to 1.30 P.M., drizzling rain; wind west; temp. 36° at start, 38° at return; ground bare. Six miles on foot. Sparrow Hawk, 2; Blue Jay, 3; Crow, 75; Goldfinch, 1; Tree Sparrow, 85; Northern Shrike, 1; Brown Creeper, 2; White-breasted Nuthatch, 3; Chickadee, 12. Total, 9 species, 184 individuals.—JOS. S. LAWRENCE.

Albany, N. Y. (north of city, near Hudson River).—Dec. 22; 10 A.M. to 2 P.M. Light rain; muddy; wind south; temp. 48° at start, 46° at return. About 6 miles on foot. Herring Gull, 8; Downy Woodpecker, 2; American Crow, 175; Tree Sparrow, 35; Song Sparrow, 15; Brown Creeper, 3; White-breasted Nuthatch, 7; Black-capped Chickadee, 18. Total, 8 species, 263 individuals.—CLARENCE HOUGHTON.

Fort Plain, N. Y.—Dec. 28; 10 A.M. to 4.30 P.M. Clear, with frequent flurries of snow; ground almost bare; wind northwest, strong; temp. 26° at start, 18° at return. Route, Oak Creek valley, through woods, thence across open fields to Erie canal and Mohawk river, following Erie canal towpath home. About 10 miles on foot. Ruffed Grouse, 1; Downy Woodpecker, 2; American Crow, 1; Red-winged Blackbird, 2; Rusty Blackbird, 1; Tree Sparrow, 20; Song Sparrow, 1; White-breasted Nuthatch, 2; Black-capped Chickadee, 18; Golden-crowned Kinglet, 2. Total, 10 species, 50 individuals. The Red-winged Blackbirds are wintering in a nearby swamp. Crows for some reason are scarce. Pheasants are quite numerous, but keep well concealed.—DOUGLAS AYRES, JR.

Syracuse, N. Y.—Dec. 26; 9.30 A.M. to 3.30 P.M. Cloudy, with light snow flurries; temp. 28°; light northwest wind; ground bare, slightly frozen. Route from Liverpool to Long Branch, returning to Liverpool by different route. Herring Gull, 22; Black Duck, 2; Downy Woodpecker, 3; American Crow, 4; Tree Sparrow, 29; Junco, 1; Song Sparrow, 9; Brown Creeper, 3; White-breasted Nuthatch, 2; Chickadee, 25. Total, 10 species, 100 individuals.—NETTIE M. SADLER and BLANCHE HAMSON.

Geneva, N. Y. (City, Lake Shore, Pine Plain, Pre-emption Road Swamp).—Dec. 28; 8 A.M. to 5 P.M. Partly cloudy; trace of snow on ground; light northwest wind; temp. about 30°. Observers mostly working apart. Horned Grebe, 1; Herring Gull, 26; Ring-billed Gull, 1; Redheaded Duck, 2000+; Canvasback Duck, 3; Scaup Duck, 500+; Goldeneye Duck, 3; Bufflehead Duck, 6; Old-squaw, 5; Great Blue Heron, 1; Ring-necked Pheasant, 5; Sharp-shinned Hawk, 1; Red-tailed Hawk, 1; Screech Owl, 1; Hairy Woodpecker, 5; Downy Woodpecker, 21; Red-headed Woodpecker, 1; Flicker, 1; Prairie Horned Lark, 6; American Crow, 1,100; Red-winged Blackbird, 1; Pine Grosbeak, 3; Purple Finch, 2; Redpoll, 1; Goldfinch, 6; Tree Sparrow, 85; Junco, 7; Song Sparrow, 7; Swamp Sparrow, 2; Cape May Warbler, 1; Brown Creeper, 7; White-breasted Nuthatch, 39; Chickadee, 117; Golden-crowned Kinglet, 11; Robin, 2. Total, 35

species, 3,979 individuals. For this locality the most unusual results are the scarcity of Canvasback, the abundance of Chickadees, and the presence of Cape May Warbler, which has been living near Mrs. Henderson's feeding shelves for two or three weeks.—W. W. GRANT, OTTO MCCREARY, E. T. EMMONS, MRS. H. H. HENDERSON, and E. H. EATON.

Rochester, N. Y. (Cobb's Hill, Highland Ave., Highland Park, Mt. Hope Cemetery, Port of Rochester and Durand-Eastman Park).—Dec. 24; 8 A.M. to 3 P.M. Cloudy; ground bare; wind northwest, strong; temp. 32° at start and finish. Ten miles on foot. Herring Gull, 50+; Ring-billed Gull, 25+; Ring-necked Pheasant, 3; Hairy Woodpecker, 2; Downy Woodpecker, 6; Blue Jay, 3; American Crow, 7; Tree Sparrow, 25+; Slate-colored Junco, 20+; Song Sparrow, 4; Brown Creeper, 1; White-breasted Nuthatch, 4; Red-breasted Nuthatch, 2; Black-capped Chickadee, 60+; Robin, 2. Total, 15 species, 214+ individuals.—RICHARD M. CHASE.

Rochester, N. Y. (Highland Park, Port of Rochester, Durand-Eastman Park and vicinities).—Dec. 23; 7:30 A.M. to 5 P.M.; ground bare; wind southwest light; temp. 41° to 45°. Observers together after 10 A.M., inside of a diameter of 11 miles, mostly on foot. Iceland Gull, 1 (bird watched in flight and at rest at from 10 to 50 yards; identified by absence of black tips to the wings); Herring Gull, 2,000; Ring-billed Gull, 1,000; Sparrow Hawk, 1; Downy Woodpecker, 4 (3 heard, 1 seen); American Crow, 6; Tree Sparrow, 8; Slate-colored Junco, 32; Song Sparrow, 8; White-breasted Nuthatch, 3; Red-breasted Nuthatch, 2; Black-capped Chickadee, 75; Robin, 2; Pheasant, 3. Total, 14 species, about 3,095 individuals. On Dec. 22 Mr. Horsey reported 3 Pine Grosbeaks, and on Dec. 24, 7 were seen by Mr. Edson.—WM. L. G. EDSON and R. E. HORSEY.

Rush, N. Y. (cemetery, wood-lots, orchards, willow swamp and evergreen hedge).—Dec. 27; 10:30 A.M. to 2:30 P.M. Cloudy; ground bare and frozen; very light west wind; snow flurries; temp. at start 29°, at returning 30°. Downy Woodpecker, 1; American Crow, 6; Snowflake, 10; White-breasted Nuthatch, 2; Black-capped Chickadee, 4; Golden-crowned Kinglet, 1. Total, 6 species, 24 individuals.—DONALD WAIT KEYES.

Rush, N. Y.—Dec. 26; 10:45 A.M. to 2:45 P.M. Cloudy; ground bare and frozen; stiff, sharp, west wind; light snow flurries; temp. 28° at start, 30° at return. Four miles on foot through four wood-lots, one small swamp and intervening fields. Observers together about half the time. Ring-necked Pheasant, 4 (cocks); Hairy Woodpecker, 1; Sparrow (flew too quickly to be positively identified), 1; White-breasted Nuthatch, 4; Black-capped Chickadee, 4. Total, 5 species, 14 individuals. Flock of Horned Larks seen next day in hilly pasture.—BESSIE A. HALLOCK and MYRON CLEMENT.

Hamburg, N. Y.—Dec. 22; 10:30 A.M. to 6 P.M. Cloudy; ground bare, not frozen; wind southwest, light; temp. 50° at start, 53° at return. Twelve miles on foot, through upland woods and fields. Observers together until 5 P.M. Ruffed Grouse, 1; Goldfinch, 3; Tree Sparrow, 16; Song Sparrow, 1; Northern Shrike, 1; Chickadee, 14. Total, 6 species, 36 individuals. Dr. Morey noted an adult Red-headed Woodpecker on Dec. 23. Birds of all kinds have been unusually scarce here during the present season. The Red-breasted Nuthatch was fairly common during the fall migration, but has not been seen since Nov. 17.—GEORGE W. MOREY and THOMAS L. BOURNE.

Rhinebeck, N. Y.—Dec. 25; 9 A.M. to 12 P.M. and 4 P.M. to 4:30 P.M. Cloudy in forenoon, clear in afternoon; ground bare for first time I can remember; wind south, light; temp. 39° at start. Red-tailed Hawk, 1; Hairy Woodpecker, 2; Downy Woodpecker, 6; Flicker, 1; Blue Jay, 10; American Crow, 20; Starling, 2; Purple Finch, 7; Goldfinch, 26; Junco, 3; Tree Sparrow, 21; Brown Creeper, 2; White-breasted Nuthatch, 4; Chickadee, 15. Total, 14 species, 120 individuals. Dec. 26; 8:15 A.M., on Hudson River, Herring Gull, 4; American Merganser, 1; Blue-winged Teal, 1.—MAUNSELL S. CROSBY.

Cortland, N. Y. (To Gracy Swamp and back, via the Marl Ponds).—Dec. 27; 9

A.M. to 4.30 P.M. Cloudy; 1 in. of snow; wind, northwest, light; temp. 16° at start, 30° at return. Twelve miles on foot. Herring Gull, 12; Ruffed Grouse, 1; Kingfisher, 1; Hairy Woodpecker, 6; Downy Woodpecker, 1; Blue Jay, 1; Crow, 500; Starling, 300 (one flock); White-breasted Nuthatch, 7; Chickadee, 23. Total, 10 species, about 862 individuals.—HAROLD H. AXTELL.

New York City (Jerome Reservoir, Van Cortlandt Park, Mosholu Parkway, Bronx Park Botanical Gardens).—Dec. 22: 8 A.M. to 1.40 P.M. Cloudy; light showers from 9 to 11 A.M., then steady rain; ground bare; wind, southeast, light; temp. 50°. About eight miles on foot. Observers in two parties in Van Cortlandt Park only. Herring Gull, 250; Greater Scaup Duck, 30; Black-crowned Night Heron, 70 (the Bronx Park Colony); Hairy Woodpecker, 3; Downy Woodpecker, 12; Blue Jay, 3; American Crow, 27; Starling, 140; Goldfinch, 2; White-throated Sparrow, 36; Tree Sparrow, 83; Field Sparrow, 37; Slate-colored Junco, 41; Song Sparrow, 40; Fox Sparrow, 1; Towhee, 1; Brown Creeper, 3; White-breasted Nuthatch, 10; Black-capped Chickadee, 71; Hermit Thrush, 1; Robin, 1. Total, 21 species, 862 individuals.—GEORGE E. HIX, CLARK L. LEWIS, JR., EDWARD G. NICHOLS and L. NELSON NICHOLS.

Douglaston, Long Island, N. Y.—Dec. 22; 8.30 A.M. to 1.30 P.M. Cloudy; raining slowly but almost steadily after 9.45 A.M.; ground bare; wind none at start but a light southerly wind developed by noon; temp. 44° at start, 51° at return. Observers together. Herring Gull, 53; Golden-eye Duck, 50; Wild Duck, not identified, but surely not Golden-eye, 25; Black-crowned Night Heron, 1; Kingfisher, 2; Downy Woodpecker, 2; American Crow, 45; Fish Crow, 23; Starling, 250 (one flock of 150 feeding with some Fish Crows upon a garbage dump); Rusty Blackbird, 24 (studied with 6X glasses at 30 ft.; the light yellow iris and the rusty tips of the feathers of upper and lower parts clearly seen); Grackle, 1 (either Purple or Bronzed); Goldfinch, 26; White-throated Sparrow, 16; Tree Sparrow, 38; Junco, 75; Song Sparrow, 11; Carolina Wren, 1; White-breasted Nuthatch, 1; Chickadee, 7. Total, 19 species, about 650 individuals.—MR. and MRS. G. CLYDE FISHER, RUTH ANNA FISHER, and FARIDA A. WILEY.

Long Beach, Long Island, N. Y.—Dec. 26; 9.30 A.M. to 4.15 P.M. Driving snow most of the morning, melting at the ground; brief sunshine after midday; snow squalls in afternoon; wind fresh, approximately west; temp. 39° at daylight, 36° at sunset; sea rough and weather thick off shore until afternoon. Horned Grebe, 1; Kittiwake (?), a distant flock of 9 small Gulls were doubtless this species; Black-backed Gull, common; Herring Gull, large numbers; Black Duck, some hundreds in "rafts" off shore all day; Golden-eye Duck, 2; Old-squaw, 9; Scoter, a distant line going east, species not made out; Sparrow Hawk, 1; Horned Lark, flock of 5; American Crow, common; Starling, something like 200; Ipswich Sparrow, 5 or 6, at one locality only; Savannah Sparrow, 1 with the preceding; Tree Sparrow, small flock; Myrtle Warbler, 2. Total, 16 species, a low record for Long Beach.—E. P. BICKNELL.

Speonk, Long Island, N. Y.—Dec. 23; 8 A.M. to 4.15 P.M. Foggy in early morning, rest of day clear; ground bare; wind north, moderate; temp. 44° at start, 47° at return. Herring Gull, 16; Greater Scaup, 6; Bufflehead, 1; Ruddy Duck, 200; Great Blue Heron, 3; Virginia Rail, 2 (heard in marsh, one flushed Dec 24); Ring-neck Pheasant, 1; Mourning Dove, 2; Marsh Hawk, 1; Red-tailed Hawk, 1; Hairy Woodpecker, 1; Downy Woodpecker, 3; Blue Jay, 3; American Crow, 20; Starling, 6; American Goldfinch, 3; Tree Sparrow, 50; Field Sparrow, 6; Slate-colored Junco, 25; Song Sparrow, 30; Swamp Sparrow, 7; White-breasted Nuthatch, 3; Black-capped Chickadee, 18; Golden-crowned Kinglet, 2. Also 200 unidentified Ducks. Total, 24 species, 609 individuals. Long-billed Marsh Wren was seen on Dec. 24. The weather has been too mild lately to record the large numbers of water-fowl here recently.—LEROY WILCOX.

East Marion, Long Island, N. Y.—Dec. 28; 9 A.M. to 4 P.M. Clear and sunny in forenoon, cloudy in afternoon; ground bare; wind north, almost none; temp. 29°. Chief

territory covered, about a mile along shore of Peconic Bay, several small pieces of woods and fields. Horned Grebe, 9; Loon, 3; Black-backed Gull, 1; Herring Gull, 225+; Red-breasted Merganser, 20; Ducks too far out for positive identification but thought to be Scaup, 25; Old Squaw, 1; White-winged Scoter, 30; Flicker, 2; Crow, 60; Starling, 3; White-throated Sparrow, 2; Slate-colored Junco, 40; Song Sparrow, 23; Myrtle Warbler, 7; Brown Creeper, 2; Red-breasted Nuthatch, 1; Black-capped Chickadee, 14; Robin, 7. Total, 19 species, about 475 individuals.—MABEL R. WIGGINS.

Orient, Long Island, N. Y.—Dec. 22; daylight to 4 P.M. Light, cloudy in morning, rain in afternoon; light southeast to fresh south wind; temp. 33° to 44°; ground bare, free from frost, no ice on ponds. Holboell's Grebe, 3; Horned Grebe, 31; Loon, 15; Great Black-backed Gull, 2; Herring Gull, 500; Red-breasted Merganser, 30; Mallard, 3; Black Duck, 40; Greater Scaup Duck, 200; Golden-eye Duck, 85; Bufflehead Duck, 75; Old-squaw, 1,500; American Scoter, 4; White-winged Scoter, 200; Surf Scoter, 180; Bob-white, 8 (one covey); Sparrow Hawk, 1; Screech Owl, 2; Downy Woodpecker, 3; Yellow-breasted Sapsucker, 1; Flicker, 2; Horned Lark, 370; Prairie Horned Lark (noted with the species); Blue Jay, 3; American Crow, 50; Fish Crow, 3; Starling, 50; Meadowlark, 11; Grackle, 1; Snow Bunting, 325; Ipswich Sparrow, 1; White-throated Sparrow, 5; Tree Sparrow, 50; Junco, 10; Song Sparrow, 185 (one in song. The frequency of this species was one of the chief interests of the day, one flock contained 35 birds inclusive of this sparrow); Swamp Sparrow, 31 (30 in one colony in a Phragmites swamp); Migrant Shrike, 1; Myrtle Warbler, 5; Maryland Yellow-throat, 1 (female. The only winter record known to the writer for Long Island. The bird was seen late in November, in the same locality, and was rediscovered for the Census only after a long search in a shelter of tall grasses. Its call note was heard repeatedly); Long-billed Marsh Wren, 1 (in a cat-tail swamp, the bird in plain view at close range as long as the observer desired to study it. Although wintering locally in the north, the writer is not aware of another winter record for Long Island); Red-breasted Nuthatch, 1; Chickadee, 22; Golden-crowned Kinglet, 2; Hermit Thrush, 3; Robin, 2. Total, 46 species, 4,025 individuals.—ROY LATHAM.

New Brighton, Staten Island, N. Y. (cross country to Richmond).—Dec. 25; 8 A.M. to 6.15 P.M. Clear; wind moderately strong, west to northwest; temp. 44° at start, 41° at return. Observers together. Fourteen miles on foot. Herring Gull, 140 (flying across Island); Small Heron, 1 (Little Green?); Sparrow Hawk, 1; Long-eared Owl, 1 (asleep in pine, we got close); Screech Owl, 3; Belted Kingfisher 1 (on account of mild season); Downy Woodpecker, 1; Blue Jay, 2; American Crow, 17; Starling, 12; Red-winged Blackbird, 1 (apparently passing winter in swamp); Savannah Sparrow, 1 (positive identification through glasses at close range); White-throated Sparrow, 2; Tree Sparrow, 2; Junco, 16; Song Sparrow, 35; Swamp Sparrow(?), 2; Cardinal (?) (heard in distance); Winter Wren, 1; Brown Creeper, 2; White-breasted Nuthatch, 4; Red-breasted Nuthatch, 1; Black-capped Chickadee, 20; American Robin, 2. Total, 24 species, about 270 individuals. On three successive Sundays before Christmas the Great Horned Owl was seen.—FRANK ALLATT and ALEC. ROSS.

Staten Island, (West Brighton to within 3 miles of Tottenville, to New Dorp).—Dec. 28; 7.30 A.M. to 5 P.M. Wind very light, west; temp. about 32°; clear in morning, but overcast in afternoon. Twenty-eight miles on foot. Herring Gull, 200; Bufflehead Duck, 1; Old-squaw, 40; American Scoter, 3; White-winged Scoter, 1; Red-shouldered Hawk, 2; Sparrow Hawk, 2; Hairy Woodpecker, 1; Downy Woodpecker, 5; Flicker, 2; Blue Jay, 2; American Crow, 60; Starling, 50; Goldfinch, 1; Tree Sparrow, 21; Slate-colored Junco (one flock of about 100 feeding on the seeds of dead weeds; another flock of about 200 in woods, on the edge of a small pond); Song Sparrow, 2 (in bushes bordering open fields, and 9 in tall grass in marshland near the open water); White-breasted

Nuthatch, 7; Red-breasted Nuthatch, 1; Black-capped Chickadee, 50; Robin, 1. Total, 21 species, about 800 individuals.—THEODORE DREIER.

* **Hackettstown, N. J. (from Hackettstown to Waterloo and about home feeding station).**—Dec. 26; 8.50 A.M. to 5.05 P.M. Snow storm during morning and part of afternoon; wind southwest, brisk; temp. 32°. Hairy Woodpecker, 1; Downy Woodpecker, 2; Blue Jay, 8; Crow, 5; Starling, 1; Rusty Blackbird, 4; Purple Finch, 40; Goldfinch, 2; Tree Sparrow, 54; Junco, 9; Song Sparrow, 3; White-breasted Nuthatch, 3; Chickadee, 8; Robin, 1. Total, 14 species, about 141 individuals. Bald Eagle shot and wounded near town a few weeks ago.—MARY PIERSON ALLEN.

Englewood Region, N. J. (Leonia to Nordhoff, through Phelps Estate, then to Coytesville, Fort Lee, and Grantwood).—Dec. 27; 11 A.M. to 4.30 P.M. Clear; ground bare; wind, northwest, light; temp. 31°. Herring Gull, 30; Sharp-shinned Hawk, 1; Red-tailed Hawk, 3; Sparrow Hawk, 1; Hairy Woodpecker, 1; Downy Woodpecker, 5; Flicker, 1; Blue Jay, 4; American Crow, 8; Starling, 8; Red-winged Blackbird, 22 (one flock of males); Goldfinch, 24; White-throated Sparrow, 48; Tree Sparrow, 125; Field Sparrow, 1; Slate-colored Junco, 80; Song Sparrow, 65; Swamp Sparrow, 2; Fox Sparrow, 23; Brown Creeper, 1; White-breasted Nuthatch, 7; Tufted Titmouse, 1; Black-capped Chickadee, 50. Total, 23 species, 511 individuals.—EDWARD G. NICHOLS.

Englewood Region, N. J. (Overpeck River, Phelps Estate, Palisades, and Leonia).—Dec. 26, 9.45 A.M. to 4 P.M. Snowing in morning, cloudy afterwards; ground bare; wind west; temp. 35°. Observers together. Herring Gull, 45; Marsh Hawk 1; Red-tailed Hawk, 2; Red-shouldered Hawk, 1; Rough-legged Hawk, 1; Sparrow Hawk, 2; Short-eared Owl, 1; Hairy Woodpecker, 2; Downy Woodpecker, 6; Blue Jay, 2; Crow, 7; Starling, 95; Meadowlark, 1; Goldfinch, 130; White-throated Sparrow, 39; Tree Sparrow, 60; Slate-colored Junco, 15; Song Sparrow, 8; Fox Sparrow, 11; Brown Creeper, 1; White-breasted Nuthatch, 3; Tufted Titmouse, 1; Chickadee, 40; Golden-crowned Kinglet, 1. Total, 24 species, about 475 individuals. Rough-legged Hawk rose from a wet meadow and was identified in good light at fairly close range as it flew by. Tufted Titmouse was observed for several minutes in company with Downy Woodpeckers, Nuthatches, and Chickadees.—WALDEN PELL 2d. and S. MORRIS PELL.

Rutherford, N. J. (From Rutherford to Morris and Essex Canal, and along canal by way of Allwood Road and return).—Dec. 28; 8.15 A.M. to 5 P.M. West wind, light; no snow; temp, 25° at start, 28° on return. About 15 miles on foot, with observers together. Sparrow Hawk, 1; Kingfisher, 1; Downy Woodpecker, 3; Flicker, 1; Blue Jay, 8; Crow, 39; Starling, 200+; Cowbird, 2 (observed with glasses at close range); American Goldfinch (?), 1; White-throated Sparrow, 55; Tree Sparrow, 75; Junco, 12; Song Sparrow, 8; White-breasted Nuthatch, 3; Chickadee, 32 (conservative estimate). Total, 15 species, 441 individuals.—O. D. KEEP, R. A. BARTON and NELSON BOTSFORD.

Morristown, N. J.—Dec. 25; 8 A.M. to 12 M. Mostly overcast, with occasional brief intervals of sunshine; ground bare; wind, northwest; rising temp. 41°. Distance covered about 6 miles. Sparrow Hawk, 1; Osprey, 1 (identification positive, seen first at a considerable distance, soaring, and recognized almost at once; then watched for five minutes or more until almost directly overhead, and not at a great height; call heard. As we customarily see a few of these birds during spring and fall migrations, I feel certain of the identification); Kingfisher, 1; Hairy Woodpecker, 2; Downy Woodpecker, 1; Red-headed Woodpecker, 1; Blue Jay, 25; Crow, 36; Starling, 7; Purple Finch, 25; (one singing); Goldfinch, 9; Tree Sparrow, 44; Field Sparrow, 1; Junco, 83; Song Sparrow, 10 (one singing); Cardinal, 2; Brown Creeper, 9; White-breasted Nuthatch, 13; Chickadee, 32; Golden-crowned Kinglet, 1. Total, 20 species, 304 individuals. Dec. 22, I saw a small flock of American Crossbills, the first in several years.—R. C. CASKEY.

Plainfield, N. J. (to Ash Swamp).—Dec. 29; 7.15 A.M. to 5.20 P.M. Fair; ground bare; wind moderate; temp. 26°. Mourning Dove, 8 (flock); Cooper's (?) Hawk, 1; Red-tailed

Hawk, 3; Red-shouldered Hawk, 1; Saw-whet Owl, 1; Screech Owl, 3; (one in a hole, two at dusk); Hairy Woodpecker, 2; Downy Woodpecker, 6; Flicker, 1; Blue Jay, 6; American Crow, 75; Starling, 30; Meadowlark, 35 (flock); Purple Finch, 8 (flock); Goldfinch, 5; White-throated Sparrow, 25; Tree Sparrow, 135; Field Sparrow, 8; Junco, 95; Song Sparrow, 22; Swamp Sparrow, 2 (together); White-breasted Nuthatch, 8; Tufted Titmouse, 1; Black-capped Chickadee, 18. Total, 24 species, 499 individuals. This is my latest record of the Mourning Dove. The Cardinal and Brown Creeper are rarely missed on this route.—W. DEW. MILLER.

New Brunswick, N. J.—Dec. 27; 8.15 A.M. to 1.30 P.M. Partly cloudy; ground bare; wind northwest, moderate; temp. 25° to 34°. Herring Gull, 4; Turkey Vulture, 1; Red-tailed Hawk, 1; Sparrow Hawk, 2; Hairy Woodpecker, 2; Downy Woodpecker, 4; American Crow, 99; Fish Crow, 8; Starling, 11; Purple Finch, 41; Goldfinch, 2; White-throated Sparrow, 1; Tree Sparrow, 1; Junco, 43; Song Sparrow, 20; Fox Sparrow, 2; Brown Creeper, 1; Tufted Titmouse, 2; Chickadee, 11; Carolina Chickadee, 16; Total, 20 species, 278 individuals. Two close views of the Turkey Vulture, flying low, were obtained. Three Purple Finches occasionally sang their warbling song.—STUART T. DANFORTH.

Sandy Hook, N. J.—Dec. 29; 12.30 P.M. to 3 P.M. Fair; sky, clear; wind, northwest, light; ground, bare; temp. 20°. Herring Gull, 500 (estimate); Double-crested Cormorant, 3; Sora Rail, 1; Sharp-shinned Hawk, 1; Fish Hawk, 2; Short-eared Owl, 1; American Crow, 300 (estimate); Fish Crow, 50 (estimate); Flicker, 2; Downy Woodpecker, 1; Starling, 150 (estimate); Cardinal, 4; Goldfinch, 5; Junco, 300 (estimate); Song Sparrow, 2; Vesper Sparrow, 2; White-throated Sparrow, 50 (estimate); White-crowned Sparrow, 1; Myrtle Warbler, 300 (estimate); Catbird, 1; Hermit Thrush, 6; Robin, 300 (estimate). Total, 22 species; approximately 1,982 individuals.—SERGEANT GEORGE E. EKBLAW and ALFRED NORDSTROM.

Monmouth Junction, N. J.—Dec. 27; 9 A.M. to 4.30 P.M. Partly cloudy, ground bare; wind west, moderate; temp. 26° at start. Marsh Hawk, 1; Red-tailed Hawk, 1; Sparrow Hawk, 3; Hairy Woodpecker, 2; Downy Woodpecker, 4; Blue Jay, 1; Crow, 41; Starling, 170; Goldfinch, 7; Tree Sparrow, 45; Junco, 33; Song Sparrow, 9; White-breasted Nuthatch, 6; Tufted Titmouse, 2; Chickadee, 10. Total, 15 species, 335 individuals.—R. E. DANFORTH.

Princeton, N. J. (the surrounding country within a radius of four miles, by motor and on foot).—Dec. 26; 10 A.M. to 4 P.M. Morning cloudy; light snow; wind west, afternoon clear; wind northwest; temp. 36° to 34°. Great Blue Heron (took flight 100 feet away, shore of Carnegie Lake), 1; Marsh Hawk, 2; Pigeon Hawk (bluish back, and rapid pigeon-like flight unmistakable), 1; Sparrow Hawk, 4; Downy Woodpecker, 2 (pair); Blue Jay, 4; Crow, 1,000; Starling, 500; Goldfinch, 15 (one flock); White-throated Sparrow, 2 (pair); Tree Sparrow, 15 (one flock); Junco, 25; Song Sparrow, 6; Cardinal, 2; White-breasted Nuthatch, 1; Tufted Titmouse, 2; Black-capped Chickadee, 8; Carolina Chickadee, 1. Total, 18 species, 1,590 individuals.—HENRY LANE ENO.

Princeton, N. J. (along Stony Brook above the Double Bridges 2 miles).—Dec. 26; 10 A.M. to 1 P.M. Alternate snow flurries and sunlight; ground bare, grass green and dandelions in bloom; wind west to northwest, strong; temp. 33° to 35°. Hairy Woodpecker, 3; Downy Woodpecker, 5; Crow, about 50; Starling, about 200 (in one flock); Purple Finch, 1; Goldfinch, 1; Tree Sparrow, 1; Slate-colored Junco, about 75 (three flocks); Brown Creeper, 5; White-breasted Nuthatch, 4; Chickadee, about 100 (three flocks); Bluebird, 2 (others heard singing). Total, 12 species, about 447 individuals.—TERTIUS VAN DYKE.

Mount Holly, N. J.—Dec. 25; 7 A.M. to 11 A.M. Clear; wind southwest and light; temp. 42° at start, 48° at return. Covered about 5 miles. Turkey Vulture, 1; Hairy Woodpecker, 1; Downy Woodpecker, 3; Blue Jay, 4; Crow, 5,000+; Starling, 10,

Goldfinch, 6; White-throated Sparrow, 21; Tree Sparrow, 30; Slate-colored Junco, 30; Song Sparrow, 14; Fox Sparrow, 1; Cardinal, 8; Myrtle Warbler, 1; Carolina Wren, 1; Brown Creeper, 2; White-breasted Nuthatch, 1; Red-breasted Nuthatch, 2; Carolina Chickadee, 7. Total, 19 species, 5,143 individuals. On walk Sunday Dec. 22, 1918, saw Field Sparrow, Tufted Titmouse, Golden-crowned Kinglet.—MR. and MRS. NELSON D. W. PUMYEA.

Moorestown, N. J. (Fifteen mile circle, including shore of Delaware River, Rancocas Creek, Swedes Run, Pompeston, Pensauken and Coopers Creeks).—Dec. 25; 6.50 A.M. to 5 P.M. Fair; ground bare; wind southwest, light, becoming northwest and blustery; temp. 42° at start, 42° at return. Three distinct units, two with automobiles, one afoot. One unit returned at noon; a second also returned but went out again; the third remained out all day. Herring Gull, 86; American Merganser, 50; Black-crowned Night Heron, 2; Killdeer, 1; Marsh Hawk, 1; Sharp-shinned Hawk, 3; Cooper's Hawk, 1; Red-tailed Hawk, 7; Red-shouldered Hawk, 2; Broad-winged (?) Hawk, 2; Sparrow Hawk, 11; Hairy Woodpecker, 4; Downy Woodpecker, 15; Flicker, 5; Horned Lark, 1; Blue Jay, 12; Crow, 261; Starling, 55; Meadowlark, 25; Purple Finch, 15; American Crossbill, 7; Goldfinch, 33; White-throated Sparrow, 92; Tree Sparrow, 70; Field Sparrow, 4; Junco, 143; Song Sparrow, 77; Fox Sparrow, 1; Towhee, 1; Cardinal, 27; Pine Warbler, 1; Myrtle Warbler, 1; Catbird, 1; Carolina Wren, 9; Brown Creeper, 3; White-breasted Nuthatch, 14; Red-breasted Nuthatch, 3; Tufted Titmouse, 7; Black-capped Chickadee, 19; Robin, 1; Bluebird, 1. Total, 41 species, 1,074 individuals. Three Purple Grackles were reported from Moorestown on the 25th, by a neighbor. The following records may be added: Yellow-bellied Sapsucker, Dec. 4, and again about the 20th; Winter Wren conspicuous by its absence.—M. ALBERT LINTON, ANNA A. MICKLE, SAMUEL N. RHODS, ELLEN C. CARTER, WILLIAM BACON EVANS and GEORGE H. HALLETT, JR.

Camden, N. J. (and vicinity).—Dec. 22; 7.30 to 8.30 A.M. and 10.30 A.M. to 4 P.M. Heavy mist changing to rain shortly, and a driving southeast storm by late afternoon; wind east to southeast; temp 45° to 50°. Observers together. Herring Gull, 103; Merganser, 8; Duck (Black?), 10; Killdeer, 1; Bob-white, 6; Cooper's Hawk, 1; Red-tailed Hawk, 2; Sparrow, Hawk, 3; Barn Owl, 1; Long-eared Owl, 1; Downy Woodpecker, 3; Crow, 30; Starling, 200; Meadowlark, 1; Goldfinch, 1; White-throated Sparrow, 50; Tree Sparrow, 8; Field Sparrow, 1; Junco, 70; Song Sparrow, 10; Swamp Sparrow, 1; Cardinal, 5; Brown Creeper, 1; White-breasted Nuthatch, 1; Red-breasted Nuthatch, 2; Chickadee, 5; Ruby-crowned Kinglet, 1; Golden-crowned Kinglet, 3. Total, 28 species, 529 individuals.—CONRAD K. ROLAND and JULIAN K. POTTER.

Haverford, Pa. (to Darby Creek and back).—Dec. 26; 9 A.M. to 4 P.M. Snowing a little, then clearing; strong northwest wind; temp. 32°. Eight miles on foot. Observers together. Broad-winged Hawk, 1 (found dead); Sparrow Hawk, 1; Downy Woodpecker, 5; Crow, 27; Starling, 2; Purple Grackle, 1; Purple Finch, 18; White-throated Sparrow, 33; Tree Sparrow, 2; Junco, 107; Song Sparrow, 9; Cardinal, 2; Carolina Wren, 2; White-breasted Nuthatch, 4; Black-capped Chickadee, 19. Total, 15 species, 233 individuals.—G. SCOVILLE and T. SPENCER.

Reading, Pa.—Dec. 25; 7 A.M. to 3 P.M. Clear; ground bare; wind west, fairly strong; temp. 40°. Observers together. Red-tailed Hawk, 1; Kingfisher, 1; Downy Woodpecker, 5; Red-headed Woodpecker, 2; Blue Jay, 2; Crow, 36; Starling, 2; Goldfinch, 6; Tree Sparrow, 63; Junco, 110; Song Sparrow, 18; Winter Wren, 1; White-breasted Nuthatch, 8; Red-breasted Nuthatch, 8; Chickadee, 53. Total, 15 species, 316 individuals.—MR. and MRS. G. HENRY MENGEL.

Chester Heights, Pa. (to West Branch of Chester Creek and Green's Creek and back).—Dec. 29; 7 to 9 A.M. Clear; ground practically bare; temp. 20° to 25°. Three miles on foot. Marsh Hawk, 1; Downy Woodpecker, 4; Crow, 30; Goldfinch, 1; Tree Sparrow, 1; Field Sparrow, 1; Junco, 36+; Song Sparrow, 2; Cardinal, 1; Carolina

Wren, 1; White-breasted Nuthatch, 2; Black-capped Chickadee, 8. Total, 12 species, 88 individuals.—W. E. HANNUM.

West Chester, Pa.—Dec. 25. Brisk west wind; mostly clear, followed by cloudy; ground bare, wet; temp. 42° to 50°. Turkey Buzzard, 4; Sparrow Hawk, 1; Downy Woodpecker, 6; American Crow, 80; Blue Jay, 2; Purple Finch, 2; Goldfinch, 45; Tree Sparrow, 50; Slate-colored Junco, 116; Song Sparrow, 27; Cardinal, 5; White-breasted Nuthatch, 2; Tufted Titmouse, 2; Chickadee, 15. Total, 14 species, 357 individuals.—C. E. EHINGER.

Lititz, Pa. (northern Lancaster County, upper waters of the Hammer Creek).—Dec. 28; 8 A.M. to 5 P.M. Clear; ground bare; wind northwest, strong; temp. at start 26°. Twenty-two miles on foot. Observers separate one half the time. Killdeer, 1; Bob-white, 67 (5 coveys); Ruffed Grouse, 2; Turkey Vulture, 15; Red-tailed Hawk, 2; Red-shouldered Hawk, 4; Sparrow Hawk, 2; Downy Woodpecker, 12; Hairy Woodpecker, 2; Flicker, 2; Blue Jay, 2; American Crow, 65; Starling, 22; Purple Finch, 12; (two flocks) Goldfinch, 26; Tree Sparrow, 215; Junco, 415; Song Sparrow, 45; Towhee, 1; Cardinal, 11; Brown Creeper, 2; White-breasted Nuthatch, 20; Tufted Titmouse, 3; Black-capped Chickadee, 105; Golden-crowned Kinglet, 3; Bluebird, 2. Total, 26 species; about 1,075 individuals. Juncos, the Winter Sparrows, and Chickadees, are more numerous than they have been in Lancaster County during winters of the past 20 years. Purple Finches were never observed in a previous Christmas Census. Crows were never so scarce as this season.—HERBERT H. BECK, ABRAHAM BECK MILLER and CHARLES S. BRICKER.

York, Pa. (to Impounding Dam and return).—Dec. 28; 8 A.M. to 2 P.M. Cloudy; ½ in. of snow; wind west, light; temp. 25° at start, 31° at return. Eight miles on foot. Observers separate. Mallard, 14; Black Duck, 18; Turkey Vulture, 1; Sharp-shinned Hawk, 1; Cooper's Hawk, 2; Downy Woodpecker, 5; Yellow-bellied Sapsucker, 1; Blue Jay, 4; American Crow, 3,200; Starling, 42; Goldfinch, 1; White-throated Sparrow, 1; Tree Sparrow, 12; Slate-colored Junco, 30; Song Sparrow, 9; Cardinal, 6; Cedar Wax-wing, 1; White-breasted Nuthatch, 4; Black-capped Chickadee, 12; Golden-crowned Kinglet, 1. Total, 20 species, 3,365 individuals. Sparrow Hawk and Hairy Woodpecker seen yesterday.—CHARLES S. WEISER and ARTHUR FARQUHAR.

Altoona, Pa.—Dec. 25; 8 A.M. to 4.30 P.M. Cloudy; snowing lightly; wind north to west, strong; temp. 42° to 32°. Observers worked separately. Downy Woodpecker, 5; Red-headed Woodpecker, 1; Blue Jay, 12; Crow, 75; Goldfinch, 6; Tree Sparrow, 167; Slate-colored Junco, 56; Song Sparrow, 1; Cardinal, 3; Redstart, 1; White-breasted Nuthatch, 2; Chickadee, 27. Total, 12 species, 356 individuals. Redstart was a young male and was studied through a glass at a distance of 30 feet. It was identified separately by McGraw and Hays.—HARRY A. MCGRAW, HARRY B. KINCH, HARRY P. HAYS, IRA J. STOFFER, CHAS. GRIMMINGER and EDGAR GRIMMINGER.

Chambersburg, Pa.—Dec. 28; 9 A.M. to 1 P.M. and 4 to 5.30 P.M. Cloudy; a little snow in spots; light west wind; temp. 28° to 34°. Four miles on foot in farming country. Crow, 220; Starling, 9; Meadowlark, 6; Purple Grackle, 2; Goldfinch, 4; White-throated Sparrow, 2; Tree Sparrow, Junco, (flock of 60+); Song Sparrow, 11; Cardinal, 4; White-breasted Nuthatch, 1; Chickadee, 2. Total, 12 species, 310+ individuals. Dec. 29 Sparrow Hawk. Seen often recently.—BENJAMIN and ROBERT WARFIELD.

McKeesport, Pa.—Dec. 29; 8 A.M. to 4.30 P.M. Partly cloudy, with snow flurries; ½ in. of snow on frozen ground; temp. 22°; wind, light northwest. Sixteen miles on foot. Observers together. Sparrow Hawk, 1; Hairy Woodpecker, 1; Downy Woodpecker, 3; American Crow, 4; Tree Sparrow, 15; Junco, 41; Song Sparrow, 21; Cardinal, 17; White-breasted Nuthatch, 11; Tufted Titmouse, 12; Black-capped Chickadee, 27; Bluebird, 2. Total, 12 species, 155 individuals. On Dec. 8, Catbird was seen and carefully noted; "cat" call-note heard and bird watched at 25 feet with 5X glasses.—THOS. L. MCCONNELL and L. F. SAVAGE.

Baltimore, Md. (western outskirts).—Dec. 23; 9 A.M. to 3 P.M. Clear; ground bare; wind northwest, light; temp. 47° at start, 53° at finish. About 7 miles on foot. Bob-white, 6; Turkey Vulture, 6; Downy Woodpecker, 1; Flicker, 3; Blue Jay, 4; American Crow, 39; Goldfinch, 21; White-throated Sparrow, 11; Slate-colored Junco, 67; Cardinal, 7; White-breasted Nuthatch, 7; Tufted Titmouse, 7; Black-capped Chickadee, 3. Total, 13 species, 182 individuals.—R. W. MAINSTER.

Camp Meade, Anne Arundel Co., Md. (chiefly along Little Patuxent River).—Dec. 22; 8.40 A.M. to 5.30 P.M. Continuous rain; ground bare; wind southwest, light to brisk; temp. c. 50°. Fourteen miles on foot. Bob-white, 15 (one covey); Red-shouldered Hawk, 1; Hairy Woodpecker, 2; Downy Woodpecker, 7; Red-bellied Woodpecker, 3; Flicker, 3; Blue Jay, 1; American Crow, 12; Purple Finch, 10 (one flock); Goldfinch, 11; White-throated Sparrow, 64; Tree Sparrow, 1; Field Sparrow, 3; (with the Tree) Slate-colored Junco, 120; Song Sparrow, 15; Cardinal, 32; Myrtle Warbler, 2 (together); Carolina Wren, 2; Brown Creeper, 1; White-breasted Nuthatch, 5; Tufted Titmouse, 14; Carolina Chickadee, 12; Hermit Thrush, 2; Bluebird, 1. Total, 24 species, about 340 individuals. The rain kept at least one species, Turkey Vulture, from the list. Some seen next day.—CHARLES H. ROGERS, Sergeant, Co. B, 31st M. G. Bn.

Morgantown, W. Va. (Route from Morgantown to Cheat River).—Dec. 27; 7.45 A.M. to 4.45 P.M. Cloudy; no wind; 1 in. of snow; temp. 30° at noon. Sixteen miles on foot. Mourning Dove, 3; Belted Kingfisher, 1; Downy Woodpecker, 6; Slate-colored Junco, 55; Song Sparrow, 38; Cardinal, 15; White-breasted Nuthatch, 6; Tufted Titmouse, 13; Chickadee, 11. Total, 9 species, 148 individuals.—A. J. DADISMAN.

Charleston, W. Va. (Kanawha County).—Dec. 22; 1 to 5 P.M. Cloudy; ground very wet; wind north, light; temp. 57° at start, 54° at return. Six miles on foot. Observers together. Bob-white, (three coveys) 22; Downy Woodpecker, 3; Hairy Woodpecker, 2; Red-headed Woodpecker, 1; Crow, 7; Goldfinch, 13; Field Sparrow, 108; Slate-colored Junco, 106; Song Sparrow, 27; Cardinal, 69 (most we've ever seen); Carolina Wren, 24; White-breasted Nuthatch, 1; Tufted Titmouse, 6; Black-capped Chickadee, 17. Total, 14 species, 406 individuals. Same territory covered as last 4 years, and have never before covered it without seeing at least a dozen Towhees (last year, 88).—ELIS CRAWFORD, FRANCIS RAWSUM, CARL and EDWARD McANDREWS, (MISS) MARY BELLE JOHNSTON, and I. H. JOHNSTON.

Lewisburg, W. Va.—Dec. 23; 8.15 A.M. to 5 P.M. Partly cloudy; ground bare; no wind; temp. 33° at start, 40° at return. Ten miles on foot. Observers together. Ruffed Grouse, 3; Turkey Vulture, 13; Red-tailed Hawk, 4; Sparrow Hawk, 1; Hairy Woodpecker, 3; Downy Woodpecker, 9; Northern Pileated Woodpecker, 2; Red-bellied Woodpecker, 6; Flicker, 1; Blue Jay, 8; American Crow, 18; Goldfinch, 66; Tree Sparrow, 286; Slate-colored Junco, 160; Song Sparrow, 12; Cardinal, 8; White-breasted Nuthatch 15; Tufted Titmouse, 7; Bluebird, 10. Total, 19 species, 642 individuals.—CHARLES O. and HARRY E. HANDLEY.

Washington, D. C. (Wellington to New Alexandria, Va.; Four Mile Run, Va.; Arlington, Va. to Washington, D. C.).—Dec. 27; 7.30 A.M. to 4 P.M. Slightly cloudy; wind northwest, light; temp. 25° to 35°. Distance 15 miles. Horned Grebe, 2; Herring Gull, 12; Ring-billed Gull, 2; American Merganser, 6; Hooded Merganser, 8; Black Duck, 3; Lesser Scaup Duck, 12; Golden-eye, 8; Great Blue Heron, 1; Turkey Vulture, 8; Sharp-shinned Hawk, 1; Cooper's Hawk, 1; Red-shouldered Hawk, 2; Broad-winged Hawk, 1; Bald Eagle, 1; Sparrow Hawk, 3; Barred Owl, 2; Kingfisher, 1; Hairy Woodpecker, 1; Downy Woodpecker, 18; Yellow-bellied Sapsucker, 4; Red-headed Woodpecker, 7; Red-bellied Woodpecker, 3; Flicker, 15; Blue Jay 16; American Crow, 350; Fish Crow, 100; Red-winged Blackbird, 12; Purple Finch, 20; Goldfinch, 20; White-throated Sparrow, 40; Tree Sparrow, 200; Field Sparrow, 11; Junco, 400; Song Sparrow, 20; Swamp Sparrow, 2; Fox Sparrow, 14; Cardinal, 25; Migrant Shrike, 2; Myrtle Warbler, 2;

Mockingbird, 3; Carolina Wren, 4; Brown Creeper, 13; White-breasted Nuthatch, 8; Red-breasted Nuthatch, 4; Tufted Titmouse, 30; Carolina Chickadee, 25; Golden-crowned Kinglet, 3; Bluebird, 21. Total, 49 species, 1,467 individuals. Same territory a few days previous yielded 42 species, including Bonaparte Gull, 1; Marsh Hawk, 2; Killdeer, 25; Pipit, 15; Winter Wren, 1; Hermit Thrush, 5. Hydroplane mock attacks have driven the ducks from the Potomac in the vicinity of the city.—MR. and MRS. LEO D. MINER, HON. EDMUND PLATT, M. C., and RAYMOND W. MOORE.

Mt. Vernon to Dyke, Va. (via Dogue Creek).—Dec. 23; 9 A.M. to 5 P.M. Clear; practically no wind; temp. 8 A.M., 42°; 12 M., 56°; 4 P.M., 52°. About 12 miles on foot. Observers together. Horned Grebe, 1; Herring Gull, 32; Ring-billed Gull, 29; Common Tern, 2; Hooded Merganser, 312 (estimated); Canvasback, 500 (estimated); Lesser Scaup, 200 (estimated); Ruddy Duck, 7; Turkey Vulture, 32; Marsh Hawk, 1; Cooper's Hawk, 1; Red-tailed Hawk, 1; Bald Eagle, 2; Sparrow Hawk, 1; Long-eared Owl, 1 (recently killed); Hairy Woodpecker, 1; Downy Woodpecker, 2; Red-headed Woodpecker, 1; Red-bellied Woodpecker, 2; Flicker, 11; Blue Jay, 13; American Crow, 250; Fish Crow, 3; Starling, 15; Meadowlark, 2; Goldfinch, 6; Tree Sparrow, 5; Field Sparrow, 7; Junco, 141; Song Sparrow, 7; Cardinal, 5; Myrtle Warbler, 26; Mockingbird, 2; White-breasted Nuthatch, 2; Red-breasted Nuthatch, 10; Tufted Titmouse, 17; Carolina Chickadee, 10; Bluebird, 10. Total, 38 species, 1,660 individuals.—W. L. McATEE, ALEXANDER WETMORE, and EDWARD A. PREBLE.

Boone, N. C.—Dec. 27; 8.30 A.M. to 4 P.M. Clear; light west wind; ground partly covered with snow. Temp. 20°. Hairy Woodpecker, 4; Downy Woodpecker, 6; Blue Jay, 1; American Crow, 5; Red-winged Blackbird (female), 1; American Goldfinch, 6; White-throated Sparrow, 1; Junco, 175; Song Sparrow, 20; Fox Sparrow, 1; Cardinal, 5; Brown Creeper, 2; White-breasted Nuthatch, 12; Tufted Titmouse, 11; Carolina Chickadee, 7; Golden-crowned Kinglet, 5; Bluebird, 4. Total, 17 species, 266 individuals.—ROY M. BROWN.

Spartanburg, S. C.—Dec. 26; 9 A.M. to 2.15 P.M. Clear; ground bare, but very wet; wind, west, very light; temp. 34°. Observers together for the greater part of the time. Mourning Dove, 7; Turkey Vulture, 13; Sparrow Hawk, 1; Hairy Woodpecker, 1 (much larger than the following); Southern Downy Woodpecker, 1; Flicker, 4; Red-headed Woodpecker, 1; Blue Jay, 12; Crow, 4; Meadowlark, 12; Purple Finch, 47; American Goldfinch, 13; White-throated Sparrow, 5; Savannah Sparrow, 4; Field Sparrow, 7; Junco, 70; Song Sparrow, 5; Towhee, 4; Cardinal, 2; Loggerhead Shrike, 1; Myrtle Warbler, 15; Pine Warbler, 2; Mockingbird, 2; Catbird, 1 (unusual for us; wing seemed to be broken); Carolina Wren, 3; Brown Creeper, 1; Red-breasted Nuthatch, 1; Brown-headed Nuthatch, 1; Tufted Titmouse, 2; Carolina Chickadee, 7; Golden-crowned Kinglet, 5; Ruby-crowned Kinglet, 4; Hermit Thrush, 9; Robin, 1; Bluebird, 14. Total, 35 species, 272 individuals. A Phoebe seen Dec. 25.—GABRIEL CANNON and GEORGE S. SNOWDEN, JR.

Aiken, S. C. (a mile and a half along a creek, and two adjoining home places).—Dec. 21; 11 A.M. to 3 P.M., and 4.30 P.M. to 5.30 P.M. Calm; temp. 72°. Bob-white, 30 (2 coveys); Mourning Doves, 4; Red-shouldered Hawk, 1; Sparrow Hawk, 1; Black (?) Vulture, about 50; Southern Hairy Woodpecker, 2; Southern Downy Woodpecker, 8; Red-headed Woodpecker, 7; Red-bellied Woodpecker, 2; Flicker, 14; Phoebe, 2; Blue Jay, 20; Meadowlark, 25; Rusty Blackbird, 50; Goldfinch, 9; Vesper Sparrow, 41; Henslow's Sparrow, 1; White-throated Sparrow, 225; Chipping Sparrow, 91; Field Sparrow, 118; Junco, 124; Song Sparrow, 92; Swamp Sparrow, 20; Towhee, (both Red-eyed and White-eyed), 26; Cardinal, 22; Loggerhead Shrike, 2; Myrtle Warbler, 20; Pine Warbler, 54; Mockingbird, 26; Catbird, 6; Brown Thrasher, 11; Carolina Wren, 17; Brown Creeper, 3; White-breasted Nuthatch, 3; Brown-headed Nuthatch, 20; Tufted Titmouse, 12; Carolina Chickadee, 23; Kinglets (both Ruby-crowned and Golden-crowned) 14; Hermit Thrush, 26; Robin, about 100; Bluebird, 30. Total, 43 species, 1,352 individuals. On

Dec. 28, 25 Fox Sparrows and 200 Bluebirds.—(MISS) LOUISE P. FORD and MARION I. PELLEW.

Sterling, Ga. (near Brunswick's our woods and Pyles Marsh).—Dec. 23; 9 to 11.30 A.M., 1 to 4 P.M. Cloudy; wind, east; temp. about 60° at start and 50° at return. Six miles on foot. Blue-winged Teal, 2; Little Blue Heron, 1; Killdeer, 7; Mourning Dove, 3; Ground Dove, 3; Turkey Vulture, 8; Black Vulture, 86; Marsh Hawk, 1; Cooper's Hawk, 1; Downy Woodpecker, 1; Red-cockaded Woodpecker, 1; Yellow-bellied Sapsucker, 2; Red-bellied Woodpecker, 1; Wood Pewee, 1 [Phoebe?]; Blue Jay, 11; American Crow, 8; Fish Crow, 112; Meadowlark, 1; Purple Grackle, 14; Boat-tailed Grackle, 4; American Goldfinch, 2; White-throated Sparrow, 51; Chipping Sparrow, 5; Song Sparrow, 26; Swamp Sparrow, 6; Fox Sparrow, 1; Chewink, 19; Cardinal, 5; Loggerhead Shrike, 1; Myrtle Warbler, 1; Palm Warbler, 7; Maryland Yellow-throat, 2; Mockingbird, 15; Brown Thrasher, 3; Carolina Wren, 3; House Wren, 1; Carolina Chickadee, 2; Ruby-crowned Kinglet, 9; Hermit Thrush, 4; American Robin, 10; Bluebird, 42. Total, 41 species, 493 individuals.—DELBERT COLEMAN (15 years old).

Fort Pierce, Fla.—Dec. 24; 7 to 11 A.M. South along Indian River to White City station, 12 to 4.30 P.M. Southwest of Ft. Pierce. Cloudy, several light showers during morning; wind south, light; temp. 68° at start, 75° at return. Eleven miles on foot. Herring Gull, 12; Laughing Gull, 16; Bonaparte's Gull, 5; Royal Tern, 53; Florida Cormorant, 19; Brown Pelican, 250; Lesser Scaup Duck, 2,000; Ward's Heron, 4; Louisiana Heron, 7; Little Blue Heron, 26; Wilson's Snipe, 1; Spotted Sandpiper, 2; Killdeer, 42; Mourning Dove, 138; Ground Dove, 26; Turkey Vulture and Black Vulture, 262; Marsh Hawk, 1; Sharp-shinned Hawk, 1; Cooper's Hawk, 2; Red-shouldered Hawk, 5; Bald Eagle, 3; Florida Sparrow Hawk, 18; Osprey, 13; Owl (unidentified), 1; Kingfisher, 18; Red-cockaded Woodpecker, 4; Red-bellied Woodpecker, 15; Flicker, 16; Phoebe, 14; Florida Blue Jay, 4; Florida Crow, 3; Fish Crow, 85; Red-winged Blackbird, 2; Southern Meadowlark, 48; Boat-tailed Grackle, 167; Florida Grackle, 7; Goldfinch, 4; Savannah Sparrow, 10; Field Sparrow, 8; Swamp Sparrow, 1; White-eyed Towhee, 3; Florida Cardinal, 13; Tree Swallow, 95; Loggerhead Shrike, 17; Yellow-throated Warbler, 2; Palm and Yellow Palm Warblers, 132; Florida Yellow-throat, 5; Mockingbird, 25; House Wren, 31; Brown-headed Nuthatch, 12; Blue-gray Gnatcatcher, 7; Robin, 1; Bluebird, 69; Total, 55 species, about 3,725 individuals. Saw 6 Snowy Egrets, Wood Ibis, Little Green Heron, Yellow-bellied Sapsucker, Dec. 22; Ruby-crowned Kinglet, Dec. 23; Pied-billed Grebe, Dec. 26; Loon, Pileated Woodpecker, Pine Warbler, Prairie Warbler, Dec. 27; Black-crowned Night Heron, Catbird, Towhee, Dec. 28.—Total of 68 species observed during Christmas week. It seemed rather strange that I should see but one Robin on the 24th, but saw hundreds on the 27th. Have seen no Hairy and Downy Woodpeckers during December. Have seen them during every other month since I came here in August.—HUGO H. SCHRODER.

Reed City, Mich. (Up the Hersey River about 4 miles). Dec. 29. Clear; very little snow; practically no wind; temp. 15° at start, 18° at return. About 15 miles on skis. Evening Grosbeak, 6; Chickadee, 7; Slate-colored Junco (two flocks), 150; White-breasted Nuthatch, 3; American Goldfinch (heard). Total, 5 species, 166 individuals.—HAROLD NORMAN.

Detroit, Mich.—Dec. 29; Belle Isle Park, 9.30 A.M. to 12 M.; Palmer Park and vicinity, 1 to 4 P.M. Snowing; light snow on ground; wind, southwest, brisk; temp. 30°, Herring Gull, 2; Bob-white (tracks) 5; Ring-necked Pheasant, 7; Hairy Woodpecker, 1; Downy Woodpecker, 3; Blue Jay, 5; Slate-colored Junco, 20; Song Sparrow, 6; White-breasted Nuthatch, 6; Chickadee, 3. Total, 10 species, 58 individuals.—RALPH BEEBE.

Detroit, Mich. (Belle Isle and river front). Dec. 27; 8 A.M. to 12 M. Cloudy; ground bare; no wind; temp. 20° to 25°. Herring Gull, 102; Ring-billed Gull, 20; American Merganser, 3; Red-breasted Merganser, 6; Golden-eye Duck, 75; Barrows Golden-eye, 10;

Greater Scaup Duck, 15; Lesser Scaup, 20; Barred Owl, 1; Hairy Woodpecker, 2; Downy Woodpecker, 9; American Crow, 3; Pine Grosbeak, 12 (one rosy male); Goldfinch, 1; Cardinal, 3; White-breasted Nuthatch, 11; Black-capped Chickadee, 9. Total, 17 species, 302 individuals.—ETTA S. WILSON.

Ann Arbor, Mich.—Dec. 26; 8.30 A.M. to 3.30 P.M. Cloudy; 1 in. of snow; wind west, light; temp. 27° at start, 24° at return. Observers together. Hairy Woodpecker, 2; Downy Woodpecker, 7; Blue Jay, 6; American Crow, 3; Tree Sparrow, 160; Junco, 13; Song Sparrow, 1; White-breasted Nuthatch, 4; Chickadee, 18. Total, 9 species, about 214 individuals.—JOSSELYN VAN TYNE and CLAUDE VAN TYNE.

Camden, Mich.—Dec. 25; 10.30 A.M. to 1.30 P.M. Cloudy; ¼ in. snow; wind North-west, light; temp. 24° at start, 28° at return. Six miles on foot. Observers together. Marsh Hawk, 2; Hairy Woodpecker, 5; Downy Woodpecker, 2; Horned Lark, 5; Blue Jay, 6; Tree Sparrow, 9; Cardinal, 5; White-breasted Nuthatch, 8; Tufted Titmouse, 1; Black-capped Chickadee, 8. Total, 10 species, 51 individuals.—RAY E. READER and WILLIS C. READER.

Bronson, Mich.—Dec. 26; 11.30 A.M. to 4 P.M. Clear at first, clouded up in the afternoon; fairly strong west wind; about 3 inches of snow on ground; brush covered with snow, making observation hard; no signs of thawing. About 10 miles. Marsh Hawk, 1; Hairy Woodpecker, 2; Downy Woodpecker, 7; American Crow, 3; Blue Jay, 7; Goldfinch, 2; Song Sparrow, 1; Tree Sparrow, 100 (approximately, all one flock); Cardinal, 5; Chickadee, 7. Total, 10 species, 135 individuals.—GARDNER BATES.

Waukesha, Wis.—Dec. 25; 9 A.M. to 12.30 P.M. and 4 to 5 P.M. Cloudy until middle of forenoon, remainder of the day remarkably fine; temp. 20° to 30°; wind westerly, light becoming fresh; ground in places bare, but for most part covered with dry, powdery snow that had fallen the preceding day, the first snow of the season; drifts 3 or 4 feet deep across the roads in places made walking difficult. Nine miles on foot along tree-bordered roads, and in the outskirts of the town. Hairy Woodpecker, 2; Downy Woodpecker, 1; Blue Jay, 10; American Crow, 12. Total, 4 species, 25 individuals. Winter mild so far, streams unfrozen. Note scarcity of seed-eating birds again this winter.—MAY MORGAN.

Madison, Wis. (encircling Lake Monona).—Dec. 27; 12.30 to 4.30 P.M. Clear. 4 to 6 ins. snow; wind southwest, very light; temp. 15° to 20°. Ten and one-half miles on foot. Observers together. Hairy Woodpecker, 1; Downy Woodpecker, 3; Red-headed Woodpecker, 1; Blue Jay, 5; American Crow, 14; Goldfinch, 3; Tree Sparrow, 100; Junco (slate-colored), 25; Song Sparrow, 1; White-breasted Nuthatch, 2; Red-breasted Nuthatch, 1; Chickadee, 2. Total, 12 species, about 160 individuals. I am only sorry that I cannot report as belonging to the above list one White-winged Scoter, one Great-horned Owl, and three Pine Grosbeaks, seen on December 22.—CLARA and WARNER TAYLOR.

Lauderdale Lake and vicinity, near Elkhorn, Wis.—Dec. 26; 10 to 11.10 A.M. and 1.40 to 3.30 P.M. Partly cloudy; ground snow-covered; wind southwest, brisk; temp. 18° at 10 A.M., 23° at 3.30 P.M. About 4 miles on foot. Observers working together. Hairy Woodpecker, 1; Downy Woodpecker, 7; Red-headed Woodpecker, 1; Blue Jay, 6; American Crow, 16; Rusty Blackbird, 3; Redpoll, 6; Tree Sparrow, 100; Brown Creeper, 1; White-breasted Nuthatch, 7; Black-capped Chickadee, 12; Robin, 1. Total, 12 species, 161 individuals.—LULA DUNBAR and ROBERT DUNBAR, JR.

St. Peter, Minn.—Dec. 25; 8.30 A.M. to 3.45 P.M. Clear; 1 in. snow; wind south, light; temp. 7° to 20°. Six mile tramp; woods, fields, river-bottom and lake. Mallard, 2; Mourning Dove, 5; Hairy Woodpecker, 5; Downy Woodpecker, 3; Pileated Woodpecker, 1; Blue Jay, 4; American Crow, 6; Red-winged Blackbird, 36; Tree Sparrow, 26; Slate-colored Junco, 6; Fox Sparrow, 2; Northern Shrike, 1; Brown Creeper, 1; White-breasted Nuthatch, 9; Red-breasted Nuthatch, 2; Black-capped Chickadee, 10. Total, 16 species, 119 individuals.—HARRY JAY LADUE.

Hutchinson, Minn.—Dec. 22; 10 A.M. to 2 P.M. Cloudy; 4 in. fresh snow; wind, brisk northwest; temp. 28° at start, 26° at return. Eight miles on foot. Observers together. Mallard, 1; Hairy Woodpecker, 3; Northern Downy Woodpecker, 5; Blue Jay, 1; Redpoll, 14; Tree Sparrow, 6; White-breasted Nuthatch, 5; Black-capped Chickadee, 22. Total, 8 species, 57 individuals. It was unusual to see a Mallard at this time of the year.—CARLOS AVERY, State Game and Fish Commissioner, and J. M. EHEIM, Game Warden.

Oberlin, Ohio (east, south and west of town).—Dec. 26; 10 A.M. to 3 P.M. Cloudy; light fall of snow; strong northwest wind; temp. 30° at start, 26° on return. Ten miles on bicycle, 4 miles on foot. Scaup Duck (?) male (not near enough for identification), 1; Sparrow Hawk, 1; Barred Owl, 1; Screech Owl, 2; Hairy Woodpecker, 1; Downy Woodpecker, 5; Flicker, 2; Blue Jay, 3; Meadowlark, 8; Tree Sparrow, 25; Slate-colored Junco, 12; Song Sparrow, 3; Cardinal, 3; White-breasted Nuthatch, 6; Chickadee, 25; Robin, 2. Total, 16 species, 100 individuals. Bluebird seen two weeks ago.—HELEN M. RICE.

Lakeside, Ohio.—Dec. 25; 1 to 6 P.M. Cloudy; ground bare; wind northwest, light; temp. 28°. Four miles. Cardinal, 2; Slate-colored Junco, 8; Horned Lark, 7; White-breasted Nuthatch, 4; Tree Sparrow, 6; Tufted Titmouse, 6; Downy Woodpecker, 1. Total, 7 species, 29 individuals.—A. CARLSON.

Canton, Ohio.—Dec. 26; 8.30 A.M. to 3.30 P.M. Cloudy; ground bare; sharp wind; temp. 25°. Ten miles on foot. Observers together. Cooper's Hawk, 1; Screech Owl, 1; Downy Woodpecker, 4; Blue Jay, 2; Tree Sparrow, 75; Slate-colored Junco, 35; Song Sparrow, 5; Cardinal, 10; Brown Creeper, 5; White-breasted Nuthatch, 10; Tufted Titmouse, 10; Chickadee, 12. Total, 12 species, 172 individuals.—MAY S. DANNER and MARY KING.

Canton, Ohio.—Dec. 25; 7 A.M. to 3 P.M. Cloudy and threatening; ground bare; strong southwest wind; temp. 30° at both start and return. Distance covered 7 miles. Bonaparte's Gull, 1; Hairy Woodpecker, 1; Cowbird, 1; Tree Sparrow, 125; Slate-colored Junco, 4; Song Sparrow, 4; Cardinal, 4; White-breasted Nuthatch, 6; Tufted Titmouse, 8; Black-capped Chickadee, 16. Total, 10 species, 170 individuals.—EDW. D. KIMES.

Cadiz, Ohio.—Dec. 22; 9.45 A.M. to 1.45 P.M. Cloudy; light rain; wind southwest, light; temp. 52° to 53°; over 1 in. of rain the preceding night. A seven-mile walk in the woods and fields about Cadiz. Red-tailed Hawk, 1; Great Horned Owl, 1; Hairy Woodpecker, 2; Downy Woodpecker, 3; Red-headed Woodpecker, 6; Red-bellied Woodpecker, 4; Blue Jay 1; American Crow, 3; Tree Sparrow, 25; Song Sparrow, 3; White-breasted Nuthatch, 5; Tufted Titmouse, 10; Chickadee, 4. Total, 13 species, 68 individuals. There were fewer birds for each hour spent afield than any time during my twenty years of bird study. A Mongolian Pheasant is roosting with a neighbor's chickens, the third case of the kind that has come under my observation near here in the past two years.—HARRY B. MCCONNELL, John WORLEY and RAYMOND TIMMONS.

Wilmington, Ohio.—Dec. 22; 9 A.M. to 4 P.M. Clear; ground bare; wind west, strong; temp. 52° at start, 53° at return. Eight miles on foot. Mourning Dove, 14; Red-tailed Hawk, 5; Hairy Woodpecker, 2; Downy Woodpecker, 4; Red-bellied Woodpecker, 6; Flicker, 3; American Crow, 123; Meadowlark, 19; Tree Sparrow, 43; Junco 112; Song Sparrow, 12; Cardinal, 2; Brown Creeper, 2; White-breasted Nuthatch, 12; Tufted Titmouse, 11; Chickadee, 19. Total, 16 species, 389 individuals. Jays we have at our feeding table, but could find none on the walk. Birds well scattered on account of warm weather will answer for some of the small numbers. Meadowlarks singing like springtime. One snake and one butterfly out.—GEO. D. HAWORTH.

Hillsboro, Ohio.—Dec. 27; 7.30 A.M. to 3 P.M. Partly cloudy; light southwest wind; 1 in. of snow; temp. 22° to 36°. Walked 7 miles. Bob-white 8; Mourning Dove, 2;

Sparrow Hawk, 2; Red-shouldered Hawk, 1; Screech Owl, 1; Belted Kingfisher, 1; Hairy Woodpecker, 6; Downy Woodpecker, 5; Yellow-bellied Sapsucker, 2; Red-bellied Woodpecker, 3; Flicker, 25; Horned Lark, 20; Blue Jay, 8; Bronzed Grackle, 4; American Crow, 10; Tree Sparrow, 100+; White-throated Sparrow, 25; Fox Sparrow, 10; Junco, 200; Song Sparrow, 100; Cardinal, 50; Mockingbird, 1; White-breasted Nuthatch, 10; Red-breasted Nuthatch, 2; Tufted Titmouse, 12; Chickadee, 14; Robin, 2. Total, 26 species, 620+ individuals.—LETHA E. ROADS.

Youngstown, Ohio.—Dec. 25, 8 A.M. to 5 P.M. Cloudy; misty rain, with an occasional snowflake; brisk southwest wind; ground bare; temp. 33° forenoon, 31° afternoon. Distance walked about 12 miles. Bob-white, 15; Screech Owl, 1; Kingfisher, 1; Hairy Woodpecker, 2; Downy Woodpecker, 6; Red-bellied Woodpecker, 1; Blue-Jay, 11; Goldfinch, 3; Tree Sparrow, 2; Junco, 9; Song Sparrow, 7; Cardinal, 16; White-breasted Nuthatch, 10; Tufted Titmouse, 6; Chickadee, 63. Total, 15 species; 153 individuals.—**GEO. L. FORDYCE, C. A. LEEDY, W. H. WARNER, H. W. WEISGERBER.**

Lafayette, Ind. (to Soldier's Home by river road and return by Happy Hollow road).—Dec. 25; 8.45 A.M. to 12 M. Cloudy; snowing, ground slightly covered with snow; wind west, brisk; temp. 30°. Eight miles on foot. Observers together. Belted Kingfisher, 1; Downy Woodpecker 6; Horned Lark 8; Blue Jay, 4; American Crow, 5; American Goldfinch, 4; Tree Sparrow, 20; Slate-colored Junco, 130; Song Sparrow, 11; Cardinal, 5; White-breasted Nuthatch, 6; Tufted Titmouse, 15. Total, 12 species, 215 individuals. The Kingfisher is unusual, but was identified with doubt.—**M. L. FISHER and PAUL AITKENHEAD.**

Millers, Ind. (Walk from Gary to Millers and among the Sand Dunes at Millers).—Dec. 27; 11 A.M. to 4 P.M. Ground covered with 4 in. of snow; sky overcast; wind southwest, light; temp. 26°. Downy Woodpecker, 1; Red-headed Woodpecker, 2; Blue Jay, 10; American Crow, 6; Evening Grosbeak, 4; Redpoll, 20; Tree Sparrow, 6; Cardinal, 1; Chickadee, 13. Total, 9 species, 63 individuals. On Dec. 21, 50 Evening Grosbeaks were seen at Millers.—**C. W. G. EIFRIG and CHRESWELL J. HUNT.**

Millers, Ind.—Dec. 26; 7.30 A.M. to 4.30 P.M. Clear; 8 in. snow; wind southwest; temp. 14° at start, 24° at return. Twelve miles on foot. Observers together. Herring Gull, 15; Merganser, 3; Red-headed Woodpecker, 3; Blue Jay, 10; American Crow, 4; Redpoll, 25; Goldfinch (?), 1; Pine Siskin, 10; Tree Sparrow, 100; Junco, 10; White-breasted Nuthatch, 1; Tufted Titmouse, 1; Chickadee, 2. Total, 12 species, about 200 individuals. The Pine Siskin was studied with glasses at 25 feet, yellow on wing noted.—**FOSTER BALLARD, JOHN AUSTIN KERR, and JENCKES MASON, Chicago, Illinois.**

Zuma Township, Rock Island Co., Ill.—Dec. 22; 8 A.M. to 3.15 P.M. Cloudy and foggy; ground bare and very wet; wind west, light; temp. 38° at start, 40° at return. Twelve miles on foot. Bob-white, 25 (two covies); Rough-legged Hawk, 3; Screech Owl, 1; Great Horned Owl, 1; Hairy Woodpecker, 5; Downy Woodpecker, 12; Red-headed Woodpecker, 40; Red-bellied Woodpecker, 4; Prairie Horned Lark, 12; Blue Jay, 30; American Crow, 17; Tree Sparrow, 160; Slate-colored Junco, 25; Cardinal, 7; Brown Creeper, 6; White-breasted Nuthatch, 11; Tufted Titmouse, 4; Chickadee, 22. Total, 18 species, about 385 individuals.—**JOHN J. SCHAFER.**

Rantoul, Ill.—Dec. 26; 10 A.M. to 12 M. Ground frozen; cloudy with snow flurries; northwest wind; temp. 20°. Prairie Hen, 27; Cooper's Hawk, 1; Red-shouldered Hawk, 1; Rough-legged Hawk, 3; Screech Owl, 3; Hairy Woodpecker, 2; Downy Woodpecker, 3; Flicker, 7; Prairie Horned Lark, 50; Blue Jay, 2; American Crow, 42; Lapland Longspur, 65; Tree Sparrow, 95; Junco, 30; Song Sparrow, 2; White-breasted Nuthatch, 1. Total, 16 species, about 315 individuals.—**SIDNEY E. EKBLAW and W. ELMER EKBLAW.**

Albion, Ill.—Dec. 25; 8.30 to 11.30 A.M. Cloudy; ground bare; wind west, light; temp. 26° to 28°. Six miles. Killdeer, 1; Bob-white, 1; Prairie Chicken 9; Mourning Dove 1; Cooper's Hawk 1; Barred (?) Owl, 1; Hairy Woodpecker, 1; Downy Woodpecker, 5; Red-headed Woodpecker, 5; Red-bellied Woodpecker, 12; Flicker, 11; Blue

Jay, 26; American Crow, 3; Goldfinch, 1; Tree Sparrow, 100; Junco, 700; Song Sparrow, 3; Cardinal, 1 pair, 1 individual; Tufted Titmouse, 2; Chickadee, 5. Total, 20 species, 881 individuals.—JOHN H. GOOCH.

Sioux City, Iowa (Car to North Riverside, north to ravines and return).—Dec. 26; 10 A.M. to 4 P.M. Cloudy; light fall of snow, intermittent through the day; wind west and northwest, strong in the open; temp. 28° to 30°. Eight miles on foot, distance covered 18 miles. Observers together. Hairy Woodpecker, 1; Downy Woodpecker, 2; Flicker, 1; American Crow, 8; Blue Jay, 2; American Goldfinch, 5; Tree Sparrow, 60 (estimate); Junco, 14; Cardinal, 8; White-breasted Nuthatch, 2; Chickadee, 50 (estimate). Total, 11 species, about 153 individuals.—MRS. F. W. MARSHALL, MISS JOSEPHINE SMITH and MRS. H. M. BAILEY.

Lexington, Ky.—Dec. 27; 10 A.M. to 12.30 P.M. Alternate sunshine and cloudy, occasional flurries of snow, little snow on ground, not covering it; temp. 24° to 28°. Route through cemetery where are many shrubs, evergreens and deciduous trees. Downy Woodpecker, 1; Red-bellied Woodpecker, 1; Flicker, 2; Crow, 1; Junco, 50; Cardinal, (one pair); Brown Creeper, 3; Chickadee, 8; Golden-crowned Kinglet, 25. Total, 9 species, 93 individuals.—EMILY BARNES, ISABEL CLAY, and S. WOOTEN.

Louisville, Ky.—Dec. 25, 8.30 A.M. to 3 P.M. Ground bare at start; snowing profusely at return; wind southwest, strong; temp. 28° at start, 29° at return. Nine miles on foot. Observers together. Mallard Duck 5; Red-shouldered Hawk (?), 2; Belted Kingfisher, 1; Hairy Woodpecker, 1; Downy Woodpecker, 3; Red-bellied Woodpecker, 2; Flicker, 1; Blue Jay, 3; American Crow, 15; Red-winged Blackbird, 1; Meadowlark, 50; White-throated Sparrow, 27; Slate-colored Junco, 60; Song Sparrow, 19; Towhee, 3; Cardinal, 75; Brown Creeper, 4; Mockingbird, 1; White-breasted Nuthatch, 5; Tufted Titmouse, 21; Black-capped Chickadee, 19. Total, 21 species, 318 individuals. Blue Jays, which usually abound in this vicinity, are exceedingly scarce now, the above being the first noted in 5 or 6 weeks.—BURT MONROE and SWALE GORDON.

Bowling Green, Ky.—Dec. 23; 8.30 A.M. to 3.30 P.M. Cloudy; wind north, light; temp. 33° to 48°. Four miles on foot. Observers together. Turkey Buzzard, 1; Black Vulture, 11; Belted Kingfisher, 1; Hairy Woodpecker, 3; Southern Downy Woodpecker, 6; Yellow-bellied Sapsucker, 1; Flicker, 4; Prairie Horned Lark, 9; Blue Jay, 13; American Crow, 125; Purple Finch, 30; American Goldfinch, 30; White-crowned Sparrow, 40; White-throated Sparrow, 8; Tree Sparrow, 3; Chipping Sparrow, 5; Slate-colored Junco, 150; Song Sparrow, 11; Towhee, 7; Cardinal, 75; Cedar Waxwing, 25 (one flock); Myrtle Warbler, 8; Mockingbird, 4; Carolina Wren, 3; Bewick Wren, 1; White-breasted Nuthatch, 2; Tufted Titmouse, 50; Carolina Chickadee, 50; Bluebird, 47. Total, 29 species, 723 individuals. Other birds seen within the week preceding census: Killdeer, Mourning Dove, Red-bellied Woodpecker, Meadowlark, Field Sparrow, Brown Creeper, and Robin. Grand total, 36. Golden-crowned Kinglets, usually winter residents, are not in evidence this winter, being rare even in migrations. On account of the mild fall and winter there have been many more birds here this winter than were to be found last winter. Two flocks of Rusty Blackbirds seen as late as December 7.—ROBERT ALEXANDER, L. Y. LANCASTER, and GORDON WILSON.

St. Louis, Mo. (Creve Coeur Lake).—Dec. 28; 9.45 A.M. to 3.45 P.M. Clear; slight covering of snow; wind northwest; temp. 25° to 28°. The party, 12 in number, covered an area of about two and a half square miles. Bob-white, 1; Marsh Hawk, 1; Sparrow Hawk, 6; Red-tailed Hawk, 1; Red-shouldered Hawk, 3; Bald Eagle, 2; Hairy Woodpecker, 5; Downy Woodpecker, 13; Red-bellied Woodpecker, 13; Red-headed Woodpecker, 1; Flicker, 61; Blue Jay, 1; American Crow, 61; Cowbird, 1; Red-winged Blackbird, 68; Purple Finch, 6; American Goldfinch, 27; Tree Sparrow, 250; Junco, 67; Song Sparrow, 67; Cardinal, 54; Logger-head Shrike, 1; Brown Creeper, 2; White-breasted Nuthatch, 1; Red-breasted Nuthatch, 1; Tufted Titmouse, 47; Black-capped

Chickadee, 20. Total, 27 species, 773 individuals.—THE ST. LOUIS BIRD CLUB, DR. ROBERT J. TERRY, President, MRS. KELTON E. WHITE, Secretary.

St. Louis, Mo. (Creve Coeur Lake and vicinity).—Dec. 22; 7.30 A.M. to 2.30 P.M. Clear. and very damp; wind southwest, strong; temp. 40° at start, 48° at return. Twelve miles on foot. Observers together. Pied-billed Grebe, 1; Green-winged Teal, 6; Carolina Rail, 1; Bob-white, 6; Duck Hawk, 1; Sharp-shinned Hawk, 1; Cooper's Hawk, 1; Red-shouldered Hawk, 1; Sparrow Hawk, 4; Bald Eagle, 1; Pigeon Hawk, 1; Kingfisher, 1; Downy Woodpecker, 16; Hairy Woodpecker, 8; Red-headed Woodpecker, 2; Red-bellied Woodpecker, 2; Flicker, 15; Blue Jay, 15; Crow, 70; Prairie Horned Lark, 13; Meadowlark, 2; Red-wing Blackbird, 1; Bronzed Grackle, 1; Purple Finch, 6; Goldfinch, 9; Tree Sparrow, 187; White-throated Sparrow, 7; Song Sparrow, 14; Fox Sparrow, 2; Slate-colored Junco, 124; Towhee, 1; Cardinal, 44; Northern Shrike, 1; Myrtle Warbler, 2; Mockingbird, 1; Carolina Wren, 3; Winter Wren, 2; Tufted Titmouse, 35; Carolina Chickadee, 27; Golden-crowned Kinglet, 3; Brown Creeper, 5; White-breasted Nuthatch, 4; Robin, 2; Bluebird, 7. Total, 44 species, 656 individuals.—DENT JOKERST and PAUL DENT.

Kansas City, Mo. (Country Club and Brush Creek Region, Swope Park, and Lower Blue Valley).—Dec. 25. Clear; 11 in. snow on ground; light northwest wind; temp. 7°. Bob-white, 8; Red-tailed Hawk, 1; Sparrow Hawk, 2; Screech Owl, 1; Hairy Woodpecker, 8; Downy Woodpecker, 7; Red-bellied Woodpecker, 3; Northern Flicker, 1; Prairie Horned Lark, 6; Blue Jay, 10; American Crow, 45; Red-winged Blackbird, 15; Bronzed Grackle, 2; Crossbill, 3; Goldfinch, 35; Harris's Sparrow, 40; White-crowned Sparrow, 2; Tree Sparrow, 50; Slate-colored Junco, 500; Song Sparrow, 250; Fox Sparrow, 8; Towhee, 5; Cardinal, 25; Carolina Wren, 6; Brown Creeper, 12; White-breasted Nuthatch, 2; Red-breasted Nuthatch, 3; Tufted Titmouse, 15; Black-capped Chickadee, 75; Bluebird, 1. Total, 30 species, 1,141 individuals.—W. C. MICHAELS and SON, A. E. SHIRLING and HARRY HARRIS.

Marionville, Mo.—Dec. 26; 10 A.M. to 6 P.M. Clear; wind, northwest; about 6 in. of snow; temp. 0° to 35°. Area covered about 8 miles. Bob-white, 100; Marsh Hawk, 1; American Rough-legged Hawk, 1; Screech Owl, 2; Downy Woodpecker, 10; Red-bellied Woodpecker, 1; Flicker, 1; Prairie Horned Lark, 150; Blue Jay, 18; Crow, 800; Meadowlark, 2; Purple Finch, 14; American Goldfinch, 30; Harris Sparrow, 4; White-throated Sparrow, 4; Tree Sparrow, 200; Field Sparrow, 20; Slate-colored Junco, 600; Song Sparrow, 230; Fox Sparrow, 2; Cardinal, 20; Loggerhead Shrike, 1; White-breasted Nuthatch, 3; Chickadee, 20; Tufted Titmouse, 16. Total, 25 species, about 2,250 individuals.—JOHNSON NEFF.

Nashville, Tenn.—Dec. 24; 1 to 5 P.M. Cloudy; ground bare; wind north, stiff; temp. 38° to 32°. Four miles on foot. Killdeer, 2; Bob-white, 6; Black Vulture, 8; Red-tailed Hawk, 1; Sparrow Hawk, 2; Screech Owl, 1; Great Horned Owl, 1; Hairy Woodpecker, 1; Downy Woodpecker, 4; Yellow-bellied Sapsucker, 2; Red-bellied Woodpecker, 3; Flicker, 6; Prairie Horned Lark, 40; Crow, 18; Meadowlark, 6; Bronzed Grackle, 4,000 (at roost); Goldfinch, 8; Savannah Sparrow, 4; White-throated Sparrow, 15; Field Sparrow, 20; Slate-colored Junco, 110; Song Sparrow, 18; Fox Sparrow, 2; Towhee, 12; Cardinal, 25; Migrant Shrike, 1 (rare here); Mockingbird, 8; Bewick Wren, 1; White-breasted Nuthatch, 1; Tufted Titmouse, 4; Carolina Chickadee, 10; Bluebird, 14; Robin, 8,000 (roosting in cemetery evergreens with the Grackles). Total, 33 species, 12,360 individuals.—A. F. GANIER.

Bismarck, N. D.—Dec. 26; 9 A.M. to 1 P.M. Medium light wind; temp. 20° to 30°; ground completely covered with snow, quite deep in places. About 15 miles covered. Pinnated Grouse, 2; Prairie Sharp-tailed Grouse, 25; Screech Owl, 1; Prairie Horned Lark, 8; Magpie, 10; Redpoll, 35; Black-capped Chickadee, 4. Total, 7 species, 85 individuals.—RUSSELL REID.

Charlson, N. D.—Dec. 20; 10 A.M. to 4 P.M. Mostly clear; ground partly snow-covered; wind varying from southwest to southeast, light; temp. 20° at start, 30° at return. Prairie Sharp-tailed Grouse, 19; Goshawk, 1; Magpie, 6; Redpoll, 15; Bohemian Waxwing, 14. Total, 5 species, 55 individuals.—ADRIAN LARSON.

Yankton, S. D.—Dec. 27; 1.15 to 5 P.M. Cloudy; traces of snow on the ground; wind northwest, medium; temp. 25°. Distance covered, 6 miles. Observers together. Hairy Woodpecker, 2; Downy Woodpecker, 5; Flicker, 1; American Crow, 1; Redpoll, 45; Tree Sparrow, 60; Slate-colored Junco, 10; Montana Junco, 3; Bohemian Waxwing, 115; Brown Creeper, 4; White-breasted Nuthatch, 1; Long-tailed Chickadee, 25; Golden-crowned Kinglet, 1; Ruby-crowned Kinglet, 2. Total, 14 species, 275 individuals.—AUSTIN P. LARRABEE and PHILO J. LARRABEE.

Fremont, Neb. (Hormel's Island, and country roads leading to town).—Dec. 26; 8.45 A.M. to 1 P.M. Partly cloudy; ground covered lightly with snow; light wind; temp. 30° to 35°. Distance covered, 8 miles. Screech Owl, 1; Hairy Woodpecker, 10; Downy Woodpecker, 12; Northern Flicker, 2; Prairie Horned Lark, 5; American Crow, 25; Goldfinch, 7; Lapland Longspur, 6; Tree Sparrow, 58; Slate-colored Junco, 7; Cardinal, 8; Brown Creeper, 2; White-breasted Nuthatch, 2; Chickadee, 43. Total, 14 species, 188 individuals.—LILY RUEGG BUTTON.

Bozeman, Mont.—Dec. 25; 10 A.M. to 2 P.M. Clear; ground thinly covered with snow; calm; temp. 16° at start, 26° at return. Five miles on foot. Red-shafted Flicker, 1; Magpie, 16; Redpoll, 23; Pale Goldfinch, 5; Western Tree Sparrow, 8; Mountain Song Sparrow, 5; Bohemian Waxwing, 70; Dipper, 1; Long-tailed Chickadee, 21; Mountain Chickadee, 1. Total, 10 species, 151 individuals.—NELSON LUNDWALL.

Great Falls, Mont. (Observations at ranch 18 miles west).—Dec. 25; 2 to 5 P.M. Clear; light snow on ground; mild west wind; temp. 33°. Four miles of river bottom. 'Pin-tail' Grouse, 8; Hairy Woodpecker, 3; Downy Woodpecker, 1; Flicker, 3; Horned Lark, 7; Magpie, 27; Pine Siskin, 33; Lapland Longspur, 5; Redpoll, (estimate) 150; Tree Sparrow, 29; Northern Shrike, 2; Bohemian Waxwing, 49; Chickadee, 23. Total, 13 species, 340 individuals. Birds observed with an 8X Bausch and Lomb glass. The Pine Siskins, Redpolls, Tree Sparrows, and Chickadees, were intermingled in a sunflower field, and I am satisfied there were a great many more of each variety than I was able to count. The Horned Larks and Lapland Longspurs were also found together. The Waxwings were feeding on the berries of wild rose bushes.—LEE M. FORD.

Great Falls, Mont. (City Limits).—Dec. 25; 1 to 3 P.M. Clear and bright sun; skim of snow; no wind; temp. 32°. Bufflehead Duck, 52; Downy Woodpecker, 2; Sparrow Hawk, 1; Hawk (unidentified), 1; Magpie, 3; Siskin, 30; Tree Sparrow, 12; Northern Shrike, 2; Chickadee, 3. Total, 8 species, 106 individuals.—BERNERS B. KELLY.

Denver, Colo.—Dec. 25; 8 to 9 A.M. and 5 to 5.30 P.M. Walking and by auto, 7½ miles; 90 per cent cloudless; 10 in. of snow on ground; wind light, east; temp. 7° in forenoon and 20° in afternoon. Ring-necked Pheasant, 2; Long-eared Owl, 5; Orange-shafted Flicker, 4; Prairie Horned Lark, 11; Magpie, 1; Meadowlark, 5; Red-winged Blackbird, 60; House Finch, 16; Tree Sparrow, 11; Mountain Junco, 3; Pink-sided Junco, 2; Song Sparrow, 1. Total, 12 species, 121 individuals.—W. H. BERGTOLD.

Golden, Colo. (Walk to Lookout Mountain and return).—Dec. 26; 8.30 A.M. to 3 P.M. Clear; 6 in. of snow; chinook wind; temp. 15° at start, 36° at return. Ten miles on foot. Rocky Mountain Hairy Woodpecker, 1; Red-shafted Flicker, 3; Magpie, 7; Long-crested Jay, 1; Gray-crowned Rosy Finch, flock of 35; Western Tree Sparrow, 14; Pink-sided Junco, 12; Gray-headed Junco, 5; Northern Shrike, 1; Red-breasted Nuthatch, 2; Mountain Chickadee, 5. Total, 11 species, 86 individuals.—PAUL H. STEELE.

Tucson, Ariz., (University of Arizona campus, west and north in Santa Cruz and Rillito valleys).—Dec. 26; 11.15 to 11.45 A.M. and 2 to 5.30 P.M. Clear; light south wind; temp. 57°. Duck (unidentified), 1; American Coot, 3; Mourning Dove, 30; Inca Dove,

2; Marsh Hawk, 2; Desert Sparrow Hawk, 1; Road-runner, 1; Gila Woodpecker, 3; Red-shafted Flicker, 3; Gilded Flicker, 7; White-throated Swift, 15; Say Phoebe, 5; Black Phoebe, 1; Vermilion Flycatcher, 1; White-necked Raven, 110; Yellow-headed Blackbird, 75; Red-winged Blackbird (subsp.?), 400; Rio Grande Meadowlark, 11; Western Lark Sparrow, 5; Gambel's Sparrow, 225; Montana (?) Junco, 6; Cañon Towhee, 4; Arizona Pyrrhuloxia, 9; White-rumped Shrike, 4; Audubon's Warbler, 3; Western Mockingbird, 1; Palmer's Thrasher, 19; Cactus Wren, 4; Mountain Bluebird, 13. Total, 29 species, 964 individuals. Numbers above 50 are estimates.—CHARLES T. VORHIES.

Multnomah (near Portland), Ore., to Columbia Slough (near Vancouver), Wash.—Dec. 22; all day. Clear day; very little wind; temp. about 40°. Observation taken within 10-mile radius. Glaucous-winged Gull, 89; Herring Gull, 47; California Gull, 11; Mallard Duck, 187; Hooded Merganser, 12; Green-winged Teal, 2; Eared Grebe, 19; unidentified Ducks on wing, about 1,000; Canvasback Duck, 14; Canada Goose, 29; Great Blue Heron, 1; Belted Kingfisher, 1; Northwestern Flicker, 4; Steller Jay, 3; Crow, 137; Western Meadowlark, 5; California Purple Finch, 17; Willow Goldfinch, 9; Oregon Junco, 98; Golden-crowned Sparrow, 21; Rusty Song Sparrow, 6; Oregon Towhee, 7; Pipit, 96; Western Winter Wren, 1; Nuthatch, 5; Oregon Chickadee, 9; Chestnut-backed Chickadee, 7; Western Golden-crowned Kinglet, 21; Ruby-crowned Kinglet, 1; Western Robin, 4. Total, 29 species, about 1,862 individuals. Observed together. A car passed over the trestle while we were observing the ducks and caused them to rise from the slough, we were all surprised at the large number. Two old duck-hunters told us that it had been years since they had seen so many at one time.—FRANK PATTON, MARY PATTON, A. L. CAMPBELL, MAMIE CAMPBELL.

Portland, Ore.—Dec. 23; 8.45 A.M. to 4.30 P.M. Clear; heavy frost in morning, not entirely melting all day; light easterly winds; average temp. 32°. Glaucous-winged Gull, 2; Herring Gull, 5; California Gull, 8; Wilson's Snipe, 5; Mallard, 160; Cinnamon Teal, 6; Pintail Duck, 2; Scaup Duck, 15; Coot, 8; Bob-white, 1; California Quail, 12; Ring-necked Pheasant, 7; Desert Sparrow Hawk, 1; Belted Kingfisher, 1; Red-shafted Flicker, 6; Western Crow, 10; Western Evening Grosbeak, 1; Crossbill, 50; Willow Goldfinch, 4; Pine Siskin, 10; Oregon Junco, 20; Rusty Song Sparrow, 10; Yakutat Fox Sparrow, 1; Oregon Towhee, 3; Western Winter Wren, 1; California Creeper, 1; Red-breasted Nuthatch, 5; Oregon Chickadee, 18; Chestnut-backed Chickadee, 3; Western Robin, 1. Total, 31 species, 353 individuals.—MARY E. RAKER.

Portland, Ore. (Hills near Portland and Guild's Lake).—Dec. 24; 8 A.M. to 3 P.M. Clear, sunny; ground bare and frozen hard; wind northwest, brisk; temp. 33° at start, 36° at return. Seven miles on foot. Observers together in forenoon, separated in afternoon. Glaucous-winged Gull, 19; Western Gull, 12; Canvasback Duck, 43; Great Blue Heron, 2; Killdeer, 4; Wilson Snipe, 2; Lewis Woodpecker, 5; Red-shafted Flicker, 2; Northwestern Crow, 27; Western Meadowlark, 17 (flock); Brewer Blackbird, 63 (flock); Willow Goldfinch, 30 (flock); Intermediate Junco, 37; Rusty Song Sparrow, 10; Oregon Towhee, 3; Vigors Wren, 5; Western Winter Wren, 3; Oregon Chickadee, 6; Chestnut-backed Chickadee, 4; Golden-crowned Kinglet, 11. Total, 20 species, about 280 individuals. Lewis Woodpecker seen flying about oak trees on an island in Guild's Lake, greenish back, white collar and reddish throat and breast noted.—W. L. BREWSTER, JR., and D. K. STRONG.

Sodaville, Ore., (by way of Waterloo, and Berlin, to Scott Creek Ford, with team, twelve miles and return.)—Dec. 21; 8 A.M. to 8 P.M. Cloudy; no snow; wind, east, light; temp. average 36°. Cooper's Hawk, 1; Western Red-tail, 1; Desert Sparrow Hawk, 8; Northwestern Kingfisher, 3; Harris Woodpecker, 1; Red-shafted Flicker, 29; Steller Jay, 4; Crow, 200; Western Meadowlark, 25; Crossbill, 400; Oregon Junco, 1,000; Rusty Song Sparrow, 12; Oregon Towhee, 10; Dipper, 1; Seattle Wren, 9; Western Winter Wren, 20; Red-breasted Nuthatch, 3; Oregon Chickadee, 12; Western Golden-crowned King-

let, 36; Ruby-crowned Kinglet, 4; (Dwarf) Hermit Thrush, 1; Western Robin, 1; Western Bluebird, 2. Total, 23 species, about, 1,783 individuals. Concerning the Hermit Thrush, there is a variety which spends the winter here, but the authorities are too indefinite concerning winter ranges, for a positive statement as to its correct name. Bird seen at twenty feet with an 8X glass.—LESLIE L. HASKIN.

Turlock, to Newman, Calif.—Dec. 25; 11 A.M. to 3 P.M. Clear; warm; light northwest wind; temp. 53°. Twenty-two miles by auto. Pied-billed Grebe, 1; White Pelican, 8; Mallard, 2; Green-winged Teal, 1; Shoveller, 17; Geese, (sp.?) 300; Great Blue Heron, 1; Little Brown Crane, 5; Coot, 125; Greater Yellow-legs, 1; Killdeer, 98; Valley Quail, 6; Western Mourning Dove, 23; Turkey Vulture, 3; Marsh Hawk, 3; Western Red-tail, 8; Red-bellied Hawk, 2; Ferruginous Rough-leg, 1; Sparrow Hawk, 5; Burrowing Owl, 7; Nuttall Woodpecker, 1; California Woodpecker, 6; Red-shafted Flicker, 10; Say Phoebe, 1; Black Phoebe, 6; Yellow-billed Magpie, 126; California Jay, 16; Western Crow, 11; Bicolored Red-wing, 50; Tricolored Red-wing, 300; Western Meadowlark, 175; Brewer Blackbird, 86; House Finch, 12; Willow Goldfinch, 8; Green-backed Goldfinch, 3; Western Savannah Sparrow, 15; Western Lark Sparrow, 4; Gambel Sparrow, 110; Golden-crowned Sparrow, 20; Thurber Junco, 60; San Diego Towhee, 1; California Towhee, 10; Cedar Waxwing, 2; California Shrike, 11; Audubon Warbler, 4; Pipit, 15; Western Mockingbird, 4; Plain Titmouse, 3; Ruby-crowned Kinglet, 5. Additional species seen in same locality on Dec. 20: Willow Woodpecker, 2; White-tailed Kite, 2; Flycatcher, (Empidonax sp.?) 1; Fox Sparrow, (Insularis ?) 5; Phainopepla, 1; Pacific Yellow-throat, 1; San Diego Wren, 2; California Bush-Tit, 12; Pallid Wren-Tit, 1; Western Robin, 1; Western Bluebird, 18. Total, 60 species, 1,738 individuals.—MR and MRS. JOHN G. TYLER.

Riverside, Calif. (City Parks).—Dec. 25; 9.30 to 11.30 A.M. Clear, strong northwind; temp. 58°. American Coot, 81; Killdeer, 1; Western Red-tail Hawk, 1; Black-chinned Hummingbird, 1; Cassin's Kingbird, 1; Say Phoebe, 1; Black Phoebe, 4; California Jay, 1; Western Meadowlark, 11; Brewer's Blackbird, 36; Lawrence's Goldfinch, 6; Western Vesper Sparrow, 1; Gambel's Sparrow, 12; Golden-crowned Sparrow 1; Western Chipping Sparrow, 2; Black-chinned Sparrow, 2; San Diego Song Sparrow, 8; House Finch, 11; California Towhee, 4; Bohemian Waxwing, 1; California Shrike, 6; Hutton's Vireo, 1; Myrtle Warbler, 1; Audubon's Warbler, 13; Pacific Yellow-throat, 2; Western Mockingbird, 10; Western House Wren, 3; California Bush-tit, 16; Ruby-crowned Kinglet, 5; Western Robin, 3; Western Bluebird, 16. Total, 31 species, 262 individuals.—MRS. GEORGE M. TURNER.

San Francisco County (Golden Gate Park, Sutro Park, and Lake Merced).—Dec. 22; Clear; temp. 55°. Western Grebe, 2; Eared Grebe, 25; Pied-billed Grebe, 9; Western Gull, Herring Gull, California Gull, Ring-billed Gull, 6,000 in all; Glaucous-winged Gull, 2; Farrallone Cormorant, 1; California Brown Pelican 2; Mallard, 84; Baldpate, 22; Green-winged Teal, 44; Shoveller, 188; Canvasback Duck, 3,500; Lesser Scaup Duck, 20; Bufflehead Duck, 3; White-winged Scoter, 1; Ruddy Duck, 50; Great Blue Heron, 9; Coot, 1,000; Killdeer, 1; Black Turnstone, (1 on Seal Rocks); California Quail, 50; Barn Owl, 1; Burrowing Owl, 1; Willow Woodpecker, 1; Red-shafted Flicker, 5; Belted Kingfisher, 2; Anna Hummingbird, 7; Black Phoebe, 4; California Jay, 1; Bi-colored Blackbird, 250; Western Meadowlark, 50; Brewer Blackbird, 2; California Purple Finch, 2; California Linnet, 35; Green-backed Goldfinch, 8; Gambel's Sparrow and Nuttall Sparrow, 300; Golden-crowned Sparrow, 12; Sierra Junco, 30; Santa Cruz Song Sparrow, 200; Yakutat Fox Sparrow, 5; San Francisco Towhee, 2; California Shrike, 2; Hutton Vireo, 2; Audubon Warbler, 1; Townsend Warbler, 1; Salt Marsh Yellow-throat, 2; Pipit, 25; Vigors Wren, 2; Western Winter Wren, 1; Tule Wren, 1; Santa Cruz Chickadee, 14; Coast Bush-Tit, 35; Golden-crowned Kinglet, 32; Ruby-crowned Kinglet, 8; Dwarf Hermit Thrush, 6; Varied Thrush, 1; Western Robin, 1. Total, 61 species, 12,058 individuals.—(Troop 20, San Francisco, Boy Scouts of America.)—

RALPH VINCENT, SANFORD MOSK, ALVA WEINER, JOE GUTMAN, FRED GEINIENE, J. L. IRWIN, and HAROLD E. HANSEN.

Is-sur-Tille, Dept. of Cote d'Or, France. Dec. 7; 8.15 A.M. to 4.25 P.M. A little sunshine, but mostly cloudy, with fog during part of the morning; calm; ground bare; temp. about 50° to 60°. Kind of country visited: Plateau of Langres (mostly its eastern slopes), covered with thick growth (plantations) of pines, spruce, and larch; open cut-over oak woods; thickets of cedar, juniper, *Crataegus*, etc.; pasture land; ploughed fields; and rather open bottom-land of Tille River with bordering beds of bulrushes; sedge, and reed (*Phragmites*). Distance covered about eight miles. Mallard (*Anas platyrhynchos*), 3; Water Rail (*Rallus aquaticus*), 1; Kestrel (*Tinnunculus tinnunculus*), 1; Tawny Owl (*Syrnium aluco*), 1; European Kingfisher (*Alcedo ispida*), 1; Greater Spotted Woodpecker (*Dendrocopus major*), 4; Magpie (*Pica pica*), 7; European Jay (*Garrulus glandarius*), 7; Carrion Crow (*Corvus corone*), 16; House Sparrow (*Passer domesticus*), 75; Bullfinch (*Pyrrhula europaea*), 3; Crossbill (*Loxia curvirostra*), 4; Chaffinch (*Fringilla caelebs*), 1; Yellow Bunting (*Emberiza citrinella*), 25; Gray Wagtail (*Motacilla boarula*), 2; European Wren (*Troglodytes troglodytes*), 5; Continental Great Tit (*Parus major*), 2; Continental Coal Tit (*Parus ater*), 3; Continental Blue Tit (*Parus caeruleus*), 4; Crested Tit (*Parus cristatus mitratus*), 13; Marsh Tit (*Parus palustris longirostris*), 8; Goldencrested Wren (*Regulus regulus*), 33; Firecrest (*Regulus ignicapillus*), 1; European Blackbird (*Turdus merula*), 2; Missel Thrush (*Turdus viscivorus*), 5. Total, 25 species, 227 individuals.—FRANCIS HARPER and REMINGTON KELLOGG.

Sore, Dept. of Landes, southwestern France.—Dec. 15; 8.30 to 11.30 A.M., 1.30 to 4.30 P.M. Weather clear and sunny; temp. 50°; ground bare; no perceptible wind. European Coot (*Fulica atra*), 1; Wood Pigeon (*Columba palumbus*), 4; European Sparrow Hawk (*Accipiter nisus*), 1; Common Buzzard (*Buteo vulgaris*), 1; Green Woodpecker (*Gecinus viridis*), 8; Woodlark (*Alauda arborea*), 4; Magpie, 25; European Jay, 6; Carrion Crow, 50; House Sparrow, 10; Chaffinch, 20; Common Bunting (*Emberiza miliaria*), 1; Reed Bunting (*Emberiza schoeniclus*), 5; White Wagtail (*Motacilla alba*), 2; Gray-headed Wagtail (*Motacilla flava*), 4; Tree Pipit (*Anthus trivialis*), 12; European Wren, 10; Tree Creeper (*Certhia familiaris*), 6; European Nuthatch (*Sitta caesia*), 5; Long-tailed Tit (*Acredula caudata*), 35; Great Tit, 2; Blue Tit, 23; Crested Tit, 9; Dartford Warbler (*Sylvia undata*), 2; Firecrested Wren, 20; European Robin (*Erithacus rubecula*), 12; European Blackbird, 2. Total, 27 species, 280 individuals.—THOMAS D. BURLEIGH, A.E.F.

Chaumont, Dept. of Haute Marne, France.—Dec. 16; dawn to 12.30 P.M. Overcast; frequent showers after 9 A.M.; strong west wind; temp. 40° to 50°. Country visited: Valley of the Marne River, uplands, ploughed fields and conifer woods on the hills. Distance covered about 10 miles. Little Grebe (*Podiceps fluviatilis*), 1; Wood Pigeon, 2; European Buzzard, 2; Kestrel, 4; European Kingfisher, 2; Skylark, 25; Magpie, 10; European Jay, 2; Carrion Crow, 10; Rook (*Corvus frugilegus*), 2; Chaffinch, 8; House Sparrow, 4; European Tree Sparrow (*Passer montanus*), 14; Yellow Bunting, 20; Cirl Bunting (*Emberiza cirius*), 1; European Wren, 5; Tree Creeper, 1; Long-tailed Tit, 16; Great Tit, 5; Coal Tit, 2; Marsh Tit, 5; Blue Tit, 2; Dipper (*Cinclus aquaticus*), 1; Goldcrest, 15; Chiffchaff (*Phylloscopus collybita*), 1; European Robin, 1; European Blackbird, 2; Missel Thrush, 2. Total, 28 species, 165 individuals. Very poor country for birds. This is a small list for this latitude in Europe. The Chiffchaff is quite exceptional at this season so far north. Seen also since Dec. 1., European Sparrow Hawk, 1; White Wagtail, 1; Gray Wagtail, 1.—LUDLOW GRISCOM, 2d Lieut. Inf. U. S. A.

THE SEASON

XI. October 15 to December 15, 1918

BOSTON REGION.—The two months since mid-October have witnessed the transition from the close of fall migration to the conditions of early winter. October was remarkable for its succession of fine sunny days without extreme weather. November, on the other hand, was less delightful, with many gray and rainy days. The first snowfall came December 3 and was followed by a second, with several inches of snow. Succeeding warmer weather, however, with rain, had quite melted it away by the 15th, revealing once more the grass still green underneath.

The latter half of October saw practically the close of the autumnal migration. The passing hosts of Blackpoll and Myrtle Warblers quickly dwindled; the last one of the former was seen at Cambridge on October 31 and most of the latter had gone a little before. Fox Sparrows arrived in some numbers during the latter half of the month, but were not as abundant as in some years. The first Tree Sparrows were noticed on November 3, in Cambridge, but the flight seems to have been small. Hairy Woodpeckers have been unusually noticeable. A number appear to be wintering in Cambridge, attracted, no doubt, by the many dying or partly decayed trees which, after the plague of gypsy, brown-tail and leopard moths, elm-leaf and other beetles, during the past decade, have gradually succumbed. About November 11, a Hairy Woodpecker was seen on two or three successive days excavating a roosting-hole in a dead branch of an elm. Downy Woodpeckers have also been more conspicuous than usual, coming freely into the more settled parts of the city, attracted, like the Hairys, by the amount of food to be found in the decaying trees. A few Flickers still remain, and are doubtless the ones that will winter. More Black-capped Chickadees are to be seen than last year, apparently, yet there are no large bands, but small companies, seldom

over five in number. These have settled down for the winter, each in some particular neighborhood. Thus, one little company of five is usually to be seen working through the shade trees, spruces, and willows, of the part of Cambridge near the Botanic Gardens.

Much interest attaches to the arrival of the irregular winter visitors from the north. Already, in late September, a few Red-breasted Nuthatches had made their appearance, but the flight has been disappointingly small; only a comparatively few birds seem to have come from the north. Great Northern Shrikes appeared in November and have been rather commoner than usual, even coming into the city. A few Snowy Owls have been reported from the coast, as at Ipswich and Essex. Pine Grosbeaks in small numbers also came in November, and, best of all, Evening Grosbeaks are with us again. A few were noticed in Belmont, November 29, and other small flocks have been reported from several nearby localities. It has been suggested by Dr. Walter Faxon that the extensive planting of box-elders, or ash-leaved maples, has been responsible, in part at least, for the almost regular visits of this bird in the east of late years. The seeds of this tree form one of its favorite articles of diet, and it is interesting to see that there is an abundant crop on the trees this year.

In Cambridge, the Starling is becoming a familiar bird and bids fair to make an attractive addition to the city avifauna if it keeps within bounds. Its habit of gathering in small companies in tree-tops, and there keeping up a musical soliloquy of sweet, whistled notes is at least a decided improvement over the House Sparrows' jargon. An interesting effect of the deep snow of December 6 was to temporarily deprive the street Pigeons of their ground food, so that at Cambridge three or four were seen awkwardly balancing among the

small twigs of a hackberry tree while they greedily gathered its still hanging fruits.—
GLOVER M. ALLEN, *Boston, Mass.*

NEW YORK REGION.—The late fall was unusually mild, the trees becoming bare, grass growing brown, and country assuming a wintery aspect without the usual cold snaps. There seems to have been no general tendency for birds to linger late, however, with the one exception of Fox Sparrows, but several isolated cases of individuals, noted far later than the accustomed dates for the departure of their respective species, are at hand: near Plainfield, N. J., a Woodcock, December 8, and a flock of fifteen Mourning Doves, December 15 (W. DeW. Miller); two Barn Swallows migrating westward at Long Beach, November 26 (J. R. P. Janvrin); a Black-throated Blue Warbler in Prospect Park, Brooklyn, November 2 (Theodore Dreier); three or four Northwestern Palm Warblers at Garden City, December 1, and a single one on December 8 and 15 (J. T. N.). There is one other December record for this bird on Long Island, an individual observed in 1914 in the same part of the island, by Messrs. R. C. Murphy and C. H. Rogers. Otherwise it has not been noted after the middle of October.

During this period Goldfinches have been in larger flocks and more generally distributed than usual, these and the wandering flocks and waves of Juncos being often the most abundant species met with on country tramps. Tree Sparrows have been late in reaching their accustomed fall feeding-grounds, having been scarce on Long Island until about Thanksgiving Day, and not being numerous yet south-westward.

Except for a small flight of Pine Siskins in late October and early November, word has not reached us of the presence of any of the erratic northern Finches, except for a single Pine Grosbeak reported at Sands Point, Long Island, November 23 (Laidlaw Williams). There have been two or three reports of the Saw-whet Owl and Northern Shrike.

In late November there was a noticeable

influx of Hairy Woodpeckers to localities where the Downy only is common. The Hairy was frequently observed in Central Park, and a dead one was seen there by Dr. Jonathan Dwight. Of possible bearing on this movement of the Hairy is an observation made by the writer in the wooded district of south-central Long Island (Mastic), somewhat earlier, of a straggling, restless, noisy flock of upward of half a dozen birds. The species is common there but almost always occurs singly or at most two together.—J. T. NICHOLS, *New York City.*

PHILADELPHIA REGION.—The mild, pleasant days of late October and early November passed with very few unusual occurrences in the bird world. The weather averaged several degrees warmer than common. White-throated Sparrows and Juncos reached the peak of their abundance about October 20 and remained very common until November 3, when they gradually decreased until they reached the ordinary winter level. During this period, also, hundreds of Robins and numbers of Cedar-birds were present. White-breasted Nuthatches were common, and several Red-breasted Nuthatches were observed (three October 20). The October flight of Woodcock was very light; most gunners I have interviewed simply say "saw none." Horned Larks were first observed November 10 at Norristown, Pa. A flock of fifty Pipits were seen on November 5 at Camden, N. J. Chickadees and Tree Sparrows are much more common than they were last fall. To date I have noticed but two Red-tailed Hawks, while other years I have seen large numbers of them. This may be a local condition and due to some extent to the extremely mild weather, there having been no snow up to the time of this writing (December 11).

The rarer northern visitors are noticeably absent, although I have a reliable report that a flock of Pine Grosbeaks were seen in central Pike County, Pa., so it is quite probable that this species may be seen at points farther south before the end of the winter. Long-eared Owls were

first observed in their winter quarters, a thick growth of pines, November 23. A dead Saw-whet Owl, which had been shot, was found December 8.—JULIAN K. POTTER, *Camden, N. J.*

WASHINGTON REGION.—Ornithological conditions about Washington during October and November have been, with little exception, about normal. In some respects, however, the autumn migration has been rather irregular. Owing, doubtless, to the fine and moderate weather generally prevailing, there has been a tendency among summer birds and transients to linger later than usual. This is evidenced most conspicuously by the Redstart, which was seen October 6 at Camp Meade, Md., by Sergt. C. H. Rogers, the latest previous autumn record of which is September 30, 1906; the Nashville Warbler, seen on October 13 by the same observer, the latest previous record of which is October 5, 1916; the Ovenbird, noted on October 4, the average departure of which is September 28; the Black and White Warbler, seen, October 2, average date of departure, September 15; Prairie Warbler, October 2, average date of departure, September 14, and latest, October 6, 1912; the Magnolia Warbler, seen, October 16, at Kensington, Md., by Mrs. Edgar W. Moore, average date of departure, September 29; the Blackpoll Warbler, seen, October 25, by Miss K. B. Baird, average date of departure, October 11; Black-billed Cuckoo, seen, October 2, average date of departure, September 21, and latest, October 8, 1916.

On the contrary, several winter birds appeared earlier than common. These are the Herring Gull, noted by B. H. Swales, November 7, on the Potomac River, the average earliest autumn appearance of which is November 22; the White-crowned Sparrow, seen, October 6 at Camp Meade, Md., by Sergt. C. H. Rogers, the earliest previous autumn date of which is October 7, 1888; and two other species, observed by Mr. and Mrs. L. D. Miner, the records of which were received too late for inclusion in our previous report: the Junco, seen, September 14, the earliest previous autumn

appearance of which is September 22, 1913; and the White-throated Sparrow, noted on the same day, the previous earliest date of which is September 15, 1889, if we except the unusual record of August 9, 1907.

The Pine Siskin, which is by no means a common bird about Washington during autumn, was noted on November 16 by L. D. Miner. The delightful little Winter Wren is apparently more common than usual this fall, and, induced by the mild weather, was heard singing by W. L. McAtee on November 17.

On November 8, while exploring the nearly dried-up marsh along Four-mile Run, in Virginia, a tributary of the Potomac River, we came across two Song Sparrows which were singing almost continuously a song so strange and utterly unlike any that we have ever before heard from the throat of a Song Sparrow that we could scarcely credit the evidence of our eyes. It was long and rambling, in form much resembling the song of the Purple Finch, but totally different in quality, being very harsh and scarcely musical, more like the grating notes of the Yellow-headed Blackbird than anything else that now occurs to mind. It would be interesting to determine whether it happened to be simply an individual peculiarity, or whether it is the more or less regular late autumn song of the species.—HARRY C. OBERHOLSER, *Biological Survey, Washington, D. C.*

MINNEAPOLIS REGION.—The weather conditions in southern Minnesota during the last two months have been unusually mild. The first killing frost did not occur in this vicinity until November 1. Thin ice formed on shallow ponds on that date, but there was no real freezing weather until three weeks later. Thanksgiving Day, November 28, there was a light snow on the ground, and for a few days it was rather wintry, but since then it has been mild for the time of the year, with considerable rain instead of snow. At this date the ground is bare and the larger lakes and rivers are only partially frozen over. These are exceptional December conditions in this part of Minnesota.

No winter visitants have thus far been observed in this locality, but it should be said that the writer has been too much occupied of late with other duties to keep in close touch with bird matters. Carlos Avery, Game and Fish Commissioner, reports that he saw two Pine Grosbeaks up near Lake Vermillion, close to the International Boundary, during the last week of November. This bird is of regular occurrence in the winter in the northern part of the state, but south of the Canadian Zone it appears so infrequently that it is but little known to bird students in the Transition Zone. A Snowy Owl was taken October 14, near Bruno, Pine County, and several others were seen about the same time in Cass County. These localities are in the Canadian Zone, far north of Minneapolis.

A feature of special interest this fall, already referred to in my last report, was a marked falling off in the numbers of migrating Ducks. While the flight was fairly good for a day now and then in some localities, and hunters were satisfied with their bags at such times, it became plainly evident, as the season advanced, that the general abundance of nearly all species was much below the normal. Mr. Avery, closely in touch with the situation, as Game and Fish Commissioner, agrees with the estimate at which I had arrived that the bulk representation this fall was probably not over 25 per cent of the normal of recent years. Various conjectures as to the reasons for this most unexpected condition have been offered. The abnormally low stage of water the past summer in all of the sloughs, ponds, and lakes of the breeding-area has been advanced as a possible cause. But this does not seem a wholly adequate explanation, and there must be other reasons. Wild rice and wild celery were unusually abundant this year, but this was of little avail, as the failure in the number of birds must have occurred from conditions operating further north earlier in the summer, before these crops were ready. The subject is worthy of special investigation, as it is a really important matter. The situation was wholly

unlooked for, coming as it did just when the increased protection of the past few years led everyone to expect that exactly opposite conditions would prevail. It is sad to think that the good old times are past, when, each October, the Canvasbacks and Redheads rose from the shallow waters of Heron Lake in such numbers that the sound made by their wings resembled the noise of a rapidly moving railway train. While it is probably true that the increased and systematic hunting of late years has played its part, it is reasonable to believe that the chief factors in this destruction have been the extensive drainage operations, the tilling of both uplands and lowlands, and the presence of many men and their habitations in that great Northland which was once in quiet and undisturbed possession of these birds as a safe and congenial sanctuary for rearing their young.—THOMAS S. ROBERTS, M.D., *University of Minn., Minneapolis, Minn.*

THE OBERLIN REGION.—The most striking thing about the months under review has been the return of the bird-life to winter conditions in the third week of October, notwithstanding the lack of anything approaching wintry weather, even to the date of writing. Two large flocks of wild Geese, species not determined, but probably Blue Geese, were seen passing southwestward on November 23, and a smaller flock on the 25th.

Ducks were reported as being exceptionally scarce in the marshes in the vicinity of Sandusky. None visited the Oberlin waterworks reservoir, and only two Pied-billed Grebes were seen there during the autumn months.

The first Snowy Owl which the writer has ever seen in this vicinity visited the western outskirts of Oberlin on the afternoon of November 30. One Bronzed Grackle and one Robin remain in the village, but there appear to be no Red-headed Woodpeckers anywhere in the region. Northern Flickers are in their usual winter numbers. Chickadees have increased over the numbers of the two preceding winters. Song Sparrows are also

more numerous than usual in winter. Six Mourning Doves have remained in a corn-field. They are pretty certain to remain all winter.—LYNDS JONES, *Oberlin, Ohio*.

KANSAS CITY REGION.—The first stormy period of the season, which occurred on October 25 and 26, had been preceded by the usual migratory drifting of the more common species, marked by somewhat unusual numbers of Savannah Sparrows, Purple Finches, and Song Sparrows, and an altogether unprecedented scarcity of Harris's and Tree Sparrows. An up-river correspondent states that on October 10 a flock of Sandhill Cranes, numbering twenty-seven birds, was seen on an island in the Missouri River, and on October 14 a freshly killed specimen of the Woodcock was examined. This region lies practically outside the range of this bird, as the available records and traditions of its occurrence here, covering a period of several decades, indicate that it is merely a straggler up the Missouri valley, though common enough in the eastern part of Missouri during migration, and fairly abundant in the sunken regions in winter.

The first movement of water-fowl on the Missouri River occurred on October 25, when great numbers of Coots, together with scattered small flocks of Blue-winged Teal, Shovellers, and Lesser Scaup, and a few Mallards, with one Redhead, were seen. Canada Geese in some numbers were heard migrating during the nights of October 24 and 25, though none were seen on the river. These wise birds have long ago learned to avoid the centers of population in the Missouri valley, where their enemies are numerous and murderous.

The next stormy period, during the third week in November, brought the Ducks in in greater numbers. During this flight a specimen of the Barrow's Golden-eye was taken, this being the third recorded specimen from this region. R. P. Holland, who handled and photographed this Duck, saw a flock of three Whistling Swans on the Missouri River near the Iowa line on November 9. This observer states that

the Bufflehead has been seen in numbers this year. This little Duck, like the Ruddy, is very irregular in the Missouri Valley.

On November 17 and 24 swarms of migrating Sparrows of several species were found in the weed patches and willow thickets of the bottom-lands. The mildness of the season probably accounts for the unusual numbers, as under normal weather conditions the bulk of these birds are south of here at this time.

The expected hordes of wintering Red-winged Blackbirds seem to have chosen other fields this year, or have not yet appeared, as they are scarce and wild.

On December 1 a lone Bluebird was seen, as well as a small troop of three Meadowlarks.—HARRY HARRIS, *Kansas City, Mo.*

DENVER REGION.—The one standing interest in bird-life is the constant possibility of surprises. On November 22, during a 'cold snap,' while on my way to breakfast at the U.S.A. General Hospital, I was delighted, yet amazed, to see a single Bohemian Waxwing. This is the first time I have known this species to visit Denver during two succeeding winters; since seeing the first one, a small flock has lingered about the hospital grounds, having been noted on November 26, 29, and 30, and December 4.

Gambel's Sparrows stayed here until October 28, and the Tree Sparrow, too, has been unusually common all fall. One might forecast an early and severe winter from the early arrival of the Tree Sparrow and the presence of the Waxwings, yet the season, so far, has been very mild, clear, and almost cloudless. Robins, Meadowlarks and Red-winged Blackbirds are still with us, and it is a treat to hear an occasional Meadowlark song.

The Great Northern Butcher-bird has visited the hospital grounds this fall at least three times, to wit: on November 12 and 17, and December 7. I imagine it takes pretty heavy toll from the Tree Sparrows and Juncos, the latter being here in their usual winter abundance and variety.—W. H. BERGTOLD, *Denver, Colo.*

Book News and Reviews

IN THE WILDS OF SOUTH AMERICA. By LEO E. MILLER. Chas. Scribner's Sons, New York, 1918. 8vo. 424 pp.; colored frontispiece; 48 full-page illustrations from photographs, and 2 maps.

This is a narrative of travel and exploration in the less-accessible part of our sister continent, incident to a study of its avifauna by the American Museum of Natural History. The narrative follows the course of nearly six years' almost continuous exploration into the tropical Jungles of the Amazon, Paraguay, Orinoco, and others of South America's master rivers, and to the frigid heights of the snow-crowned Andes. The value to science of Mr. Miller's work is familiar to every student who has followed Dr. Chapman's recent publication on South American birds. The present volume is an interesting record of achievement which will prove useful in many ways. It gives a detailed, clean-cut picture of conditions, which will be of service to any future traveler. The author's personality, as revealed by various physical and human vicissitudes of an unknown country, should be of interest to the inexperienced explorer.

We have all of us mental pictures of the strange and beautiful birds of South American jungles. Comparatively few of us will be so favored as to know them in nature. We see them as on a Japanese screen, suspended against an intangible background, and descriptions of conditions under which they are met with have much interest; for instance, the paragraphs relative to bird-life on the Rio Sucio in Chapter IX. The author here speaks of "an interesting provision of nature whereby three families of birds frequently found in the same locality are able to obtain their sustenance. They are the parrots, trogons, and toucans, all of which feed upon fruit, each seeming to secure its food in a different manner. The zygodactyl feet of the parrots enable them to *climb* out to the tip of fruit-laden branches and to

cling to them in any position while feeding; toucans, endowed with an enormously elongated bill are able to *reach* a long distance for a coveted morsel, which is grasped between the tip of the mandibles and tossed back with an upward jerk of the head, to be swallowed; a trogon has a very short beak and neck, and the delicate feet are not adapted to climbing, but the wings of the bird are so constructed as to enable it to hover, from which position the fruit it desires may be snapped off the stem, when the bird returns to its perch to devour it."

Although obviously intended for popular reading and full of human interest, it is to be regretted that the book is without an index which would have enhanced its reference value. It is illustrated from photographs of the country and natives and with a colored frontispiece of the Cock-of-the-rock by Fuertes.—J. T. N.

FOUR YEARS IN THE WHITE NORTH. By DONALD B. MACMILLAN. Harper Bros., 413 pp., illustrated by photographs.

This is a narrative of an Arctic Expedition in search of the supposed 'Crockers Land.' Its scene of operation was north-western Greenland and the land to the west thereof. An appendix of nine pages, which takes up 35 species of birds from this section of the Arctic, has much more ornithological interest than would be supposed from its brevity. We read with interest as regards the Fulmar that, "from a rest upon the water this bird spreads its wings and dives fully beneath the surface to grasp food." This is a method of feeding rare among Petrels, and which is, we believe, sometimes paralleled by species of the Southern Hemisphere. There are frequent references to birds in the narrative, and photographs of a flock of Little Auks and of the nest of the Knot—one showing a set of three eggs, the other the brooding adult—deserve special mention. "Contrary to the general belief, this bird lays its eggs not near the shore, but

well back among the hills. The color of the back so closely resembles that of the soil that the bird on its nest can only be detected with difficulty."—J. T. N.

The Ornithological Magazines

EL HORNERO.—The first number of this magazine of South American ornithology was reviewed in BIRD-LORE for May-June. The second number, May, 1918, of 80 pages, has now come to hand. A leading article in it, by Roberto Dabbene, begins a review of Argentine Lariforms or Gulls, etc., illustrated with excellent line drawings of details of these birds, the present number dealing with the Gulls proper (*Larus*). There are several local or faunal lists, especially noteworthy being one of birds of northeastern Argentina.

By way of variety are articles by Pedro Serié, listing common and technical names of about 150 Argentine birds, an article by Anibal Cardoso, in which are reproduced figures published by early Spanish pioneers of the Rhea and other species, which they encountered, and a reprint of a poem about the 'Hornero' by Leopoldo Lugones.

A number of pages are devoted to shorter notes, especially interesting ones having to do with nesting and other life-histories. Here we find a full-page plate of a pair of Hawks, their nest and young, mounted in the National Museum of Natural History at Buenos Aires, and the description of a new subspecies of Bush Shrike (*Batara cinerea argentina*), and Dabbene describes the remarkable habit of the Yellow-billed Teal which at times lays its eggs away from water in the nest of the communal Parakeet (*Myiopsitta monachus*).—J. T. N.

THE CONDOR.—Despite its small size, the December number of 'The Condor' has rather varied contents and includes two general articles, four brief notes, a discussion of the use of trinomials, and the index of the volume. The leading article, by W. C. Bradbury on the 'Nesting of the Rocky Mountain Jay,' illustrated by

eleven unusually clear cuts, is a distinct contribution to the life-history of this interesting bird and a fit companion-piece to the account of the White-throated Swift by the same author in the May number. Little is really known about the breeding habits of this Jay, notwithstanding the fact that the first nests were collected nearly forty years ago. Like other members of its family, the bird breeds early, while snow is on the ground. The three nests here figured were found in Grande, Saguache, and Gunnison counties, on May 2, April 26, and April 21 respectively, at altitudes varying from 8,600 to 10,600 feet. The Saguache county set contained three eggs and the others two each, all of which are figured and accompanied by detailed measurements.

The second article contains a 'Description of a New *Lanius* [*Lanius l. nelsoni*] from Lower California,' by H. C. Oberholser, based on a specimen collected by E. W. Nelson and E. H. Goldman at Todos Santos, December 26, 1905.

The brief notes include the record of a Kaeding Petrel taken just inside the southern boundary of California, thus restoring the species to the state list, records of the eggs of the Dwarf Cowbird found in June and July, 1918, in the San Bernardino Valley in ten nests of other species of birds, a remarkable observation of the first flight of a young Golden Eagle, and miscellaneous notes on several interesting Texas birds.

Those who are interested in the subspecies question should read Taverner's communication on 'Trinomials' in reply to a criticism in the July number and then turn to Dwight's 'Exaltation of the Subspecies' in 'The Auk' for January, 1904.

Volume XX of 'The Condor' is larger than its predecessor but still 10 per cent smaller than the average size established for several years, and 20 of the 226 pages are necessarily devoted to the index and list of members. We hope that next year conditions will be favorable for the publication of a volume of normal size—T. S. P.

Bird-Lore

A Bi-Monthly Magazine

Devoted to the Study and Protection of Birds
OFFICIAL ORGAN OF THE AUDUBON SOCIETIES

Edited by FRANK M. CHAPMAN

Contributing Editor, MABEL OSGOOD WRIGHT

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Bird-Lore's Motto:

A Bird in the Bush Is Worth Two in the Hand.

THE present winter doubtless finds an unprecedented number of BIRD-LORE's friends among foreign surroundings, foreign peoples, and foreign birds.

The first aspect of the situation which we will mention is that as this January-February number goes to press, material for this page has not been received from the Editor (last heard from in Peru), doubtless because of the uncertainty of transportation, and consequently of the mails. Our most recent word from him is therefore the second of his South American travel articles which came to BIRD-LORE's office only a short time ago.

Of late our faces have been so much turned toward France that the three Christmas Census reports from members of the American Expeditionary Forces there, have an especial interest. Aside from this especial interest, it will be worth while for BIRD-LORE's readers to compare them with those from our side of the water; in number of species observed they agree with those of the latitude of New York City. Like the American lists, they contain a Kingfisher, one or two Raptores, Woodpeckers, Crows, and Jays. The seed-eating Finches are a large element. There is the Wren (allied to our Winter Wren), Creeper, Nuthatch, Kinglet, Blackbird, to correspond to our Robin, and one or two other Thrush-like birds. They mention more species of Titmice than the American reports; Wagtails, which are absent here; Magpie and Dipper—forms

which strangely enough range across Asia and occur in census reports from the western states, but are not found in the east. On the whole these reports from France are very comparable with those from the United States, although the species are different.

If it is true, as we believe, that a thorough knowledge of any phase of a subject is the best preparation for grasping the subject as a whole, and that no one phase can be thoroughly mastered without some knowledge of the others, we may prophesy that an interest in foreign bird-life will be a valuable tendency for American bird-students to follow.

BIRD-LORE is interested in birds rather than in their names, but it will do no harm to glance at certain problems in regard to names recently discussed by our contemporaries, as these are bound to affect us sooner or later.

There are many geographic races of the Horned Lark occurring in North America. An interesting fact about the Horned Lark is its differentiation into these races, but, as many of the races cannot be identified with certainty in life, it is essential that we have an English and a technical name for the species as a whole—'Horned Lark (*Otocoris alpestris*). There are, however, persons who would confine this name to the race of the Horned Lark breeding in the Arctic, which leaves the species nameless. Again, allied birds occurring on more or less adjacent territory are customarily considered geographic races when intermediates between them occur. Ordinarily, intermediates occur only when the two birds differ from each other in 'quantitative' characters, one being larger than the other, lighter or darker, redder or grayer in plumage, etc. Where thoroughly unlike birds have intermediates, as they do in some cases, it is a question whether calling both by the same species' name facilitates the discussion of them, or even expresses their true relationship most satisfactorily; perhaps respectively the two best reasons for naming them at all.

The Audubon Societies

SCHOOL DEPARTMENT

Edited by ALICE HALL WALTER

Address all communications relative to the work of this department to the Editor, 67 Oriole Avenue, Providence, R. I.

A YEAR OF RECONSTRUCTION

The year 1919 is destined to go down in history as a period of peaceful reconstruction. That, at least, is the hope of the world. Never before have like conditions confronted the world. Never before has the world been as ready to discuss disputed conditions so sanely and thoughtfully. It is a year opening with high aspirations, ideals of far-reaching influence, and, best of all, a year betokening a new era of sympathy and brotherhood.

It would seem as if every living being must respond to the mighty movement of National life, now making itself felt literally throughout the earth. The only true response to such a stupendous stimulus must show in action. No longer will passive acceptance or a negative attitude of silence be welcome in a society throbbing with a universal heartbeat. To bring about the era of real peace and common prosperity to which each one of us would attain, but which can only be assured through the coöperation of everyone, is a task at once individual and collective.

Reconstruction is the keynote of the conception of world-security upon which to-day hangs the fate of nations, a reconstruction such as no person, however great in authority or position, has ever deemed possible of accomplishment until now. Even now, at the dawn of a New Year and a new era, this radiant goal may only be reached by the unified, harmonious effort of all. Statesmen may chart the way, governments may pave the course, but the goal will be won by individual runners, and only those will attain who fall into line on this blood-bought path, each step of which must be cleared of dangerous obstructions by the advancing hosts.

Everywhere the effect of this great enterprise is felt. Homes, churches, business and educational institutions, as well as every form of artistic and industrial undertaking are reacting to this supreme influence of beneficent reconstruction.

Again and again, we should say to ourselves: "Never let prejudice, ignorance, or indifference come between me and the truth." Looking ahead, the Audubon Society sees, as ever, a long, long vista of betterment in its work, and it is becoming a broadening vista, with the end more plainly in sight. Here, as elsewhere, reconstruction is needed, ready hands and keen brains. When education shall have accomplished what is now only insecurely held by

legislation, the Audubon Society may feel that its work is prosperously in line with larger enterprises affecting national welfare.

It is not necessary to seek new problems or to search for a new world in which to work. The task is set, the time is now, only the spirit and method of the undertaking needs the reconstructive influence. Let us review the whole work, carefully, alertly, not trying to gloss over the weak places, but getting straight to the real issues, namely:

1. Are we upholding conservation measures wisely and thoroughly?
2. Are we personally extending our own knowledge of actual conditions or helping anyone else to get at the truth in our study of nature?
3. Are we raising bird- and nature-study to the highest and most beneficial standard in club, home, and school?
4. Are we aware of the true value of our relations to nature?
5. Have we ever yet allowed ourselves or helped others to gain the *full benefit* of the outdoor world?
6. Are we seeking through all channels, scientific and esthetic, to know, feel, and enjoy nature and, through nature, life?

In the words of Browning, ask yourself,

"Do I seek how star, earth, beast,
Bird, worm, fly, gain their dower
For life's use, most and least?"

Do not confess

"Back from the search I cower,"

but rather

"Seek and find some sense which no peer
Yet from singer, sayer,
Ever has extracted—listening to
" . . . the bird-like fluting
Through the ash-tops yonder—

Five-pearled notes that surely
Gather, dewdrop fashion . . ."

Then will Nature

"Yield *new men new learning*."

Remember that through appreciation of the beautiful and the cultivation of that finer inner sense of kinship with Nature, born of a desire to *know the truth*, come man's highest aspirations and the ardent glow of life which stirs to the noblest SERVICE.—A. H. W.

JUNIOR AUDUBON WORK

For Teachers and Pupils

Exercise XLIII: Correlated with History, Elementary Agriculture, and Animal Husbandry

III. BUTTER, MILK, CHEESE, AND POULTRY

As we begin work again after the holiday season, let us look far out toward the most distant horizon of our studies, instead of glueing our eyes to the pages of a book for a certain number of hours each day. The world in 1919 is rapidly changing, so far as its geography, political and economic development, and intellectual and spiritual forces are concerned. Of this fact we have become more and more aware through the vicissitudes of a world war. What we are less informed about and, consequently, are less sure of, are the manifold changes which from year to year through countless ages the world of Nature has undergone.

The great war is teaching us much, perhaps nothing of more lasting value than the real worth of truth. We read that the *George Washington* in its recent, memorable voyage abroad carried safely to the Old World not only a company of peace-makers, but also several truck-loads of plain, carefully compiled facts, in other words, tons of truth stated as clearly as possible by eminent scholars of the New World. What these facts touch upon is of interest to every person, and, now that it is safe to refer to their content, we will do well to get a glimpse of what as stable a peace as can be devised will have for its foundation. History, geography, economics, education, map-making, irrigation, physiography, and international law are the bases of this gigantic assemblage of facts. Speculation or guess-work have no place in this attempt to base peace upon truth. The needs, resources, opportunities, and possible attainment of all affected nations are illuminated by as photographic a likeness of their actual conditions as can be made by telling the simple truth about them. When a durable peace is effected, it will signify a consideration of many matters about which every person should know something, namely, all material resources, such as food, minerals, water-power, fuel, crops, live-stock, with traffic routes and natural and political boundaries; the present state of irrigation and possibilities in its development; raw materials of all kinds, cable and coaling stations, railways, free and open ports, etc; historic rights and laws and customs affecting the religious and political life of nations and all phases of history relating to treaties, frontiers, and territorial waters, as well as educational advantages and progress.*

This same spirit of getting at the truth animates most of the students of

*See *Science*, N. S. Vol. XLVIII, No. 1250, pp. 590-592. Inquiry of the American Geographical Society for the Information of the Peace Commissioners.

Nature. If we are to make any real progress in knowledge and its practical application, that is, if we are going to use anything we learn, we must start from the truth of what is already known toward the truth of what may be known in the future.

And so, I urge you, by these examples of the importance of an accurate knowledge of facts, to lay more and more stress upon getting at the truth of anything you may be studying. In the matter of food-conservation, upon which we have touched briefly in the two foregoing exercises, those who have taken pains to become thoroughly and correctly informed about the natural and domestic distribution of food-supplies throughout the world are the ones who can conserve intelligently and with benefit to themselves as well as to those in less fortunate circumstances.

In considering the topic of meat, the related topics of milk and cheese should be taken up, both of which may be termed by-products of meat. It is by means of our knowledge of the value of milk and cheese in human diet that we come to understand why cows should be increased rather than "prize" beef, i. e. highly fattened steers. In these days, not only should larger herds be kept in order to increase the supply of meat, but more people should learn how to make butter and cheese, and everyone should study the manifold uses of milk in human diet. It is a really fine accomplishment to know how good butter and cheese are made, and one in which our grandmothers took much pride. Just before the war, an acquaintance of the writer began to experiment making cottage cheese. She devoted much thought and time to studying the best method of making soft cheeses, with the result that in addition to plain cottage cheese, she learned the secret of making delicious pimento, sage, and pepper cheeses, which, if placed on the market, would command a high price.

A millionaire became interested in cheese-making late in life, when he had practically retired from active business, and anyone who is fortunate enough to procure one of his Jersey cream or even skim-milk cheeses could easily imagine he was eating the most delicately flavored Edam. Considering the high nutritive value of milk, butter, and cheese, it becomes a matter of much importance, whether the boys and girls of the present day revive the interest of former generations in learning to make butter and cheese of a high grade, and to keep herds of cattle which will insure a proper milk-and-meat-supply to the world.

Since it is unlikely that a sufficiently large supply of meat will be raised unless added to by poultry products in the way of eggs and fowl, the poultry business should be more widely studied and carried on. Although not strictly equivalent to the meat furnished by cattle, poultry makes one of the most palatable meat substitutes, while eggs are relished by the majority of people.

Poultry-raising can be made profitable only through a correct understanding of the best use to which different varieties of fowl can be put, that is, whether

to the production of eggs or of marketable food, together with a practical experience of the difficulties of keeping poultry up to a given standard of health, production, and purity of strain. Success with poultry is not a matter of luck, guesswork or anything else which denotes a careless, unintelligent method.

Scientists of reputation have devoted years of painstaking study to the domesticated fowl, while in every state in the Union an agricultural college of standing is putting into practice the laws which govern the maintenance of the highest grade of poultry production. The history of a common hen has as much attraction as the story of many a world-traveler. If we turn back to look for the origin of the hen, we find that we must practically encircle the globe. In India, southern China, and the East Indies there still persists a wild fowl known as the Jungle Fowl, from which some of our domesticated poultry have descended. "The oldest fowl in domestication, however, is the Aseel or Malay fowl, which has been bred for over 3,000 years," the origin of which is still uncertain. "It is still possible that the ancestor of this bird or its bones may be found in the interior of New Guinea, Borneo or the Philippines."

There are notable differences between the Jungle and Aseel fowls, differences important for us to learn about. "The Jungle Fowl is a slender, agile bird with long wings, erect tail and a good flyer, while the Aseel is a very broad, heavy bird with short wings, drooping tail and unable to fly. The Jungle Fowl has a long, slender beak; that of the Aseel is short and thick. The comb of the former is single, high; that of the latter triple and low. The former has slender, olive-colored shanks; the latter thick and yellow shanks. The Jungle Fowl has a red eye; that of the Aseel is pearl-colored." In coloration and pattern of plumage these two ancient stocks differ widely. The Aseel is a mottled bird while the Jungle Fowl is variegated red with a black breast. Internally, as well as externally, the two are unlike, as their descendants prove, for the "nervous, flighty, egg-laying races," such as the Leghorn, Minorca, Spanish, Andalusian, trace back to the wild Jungle Fowl, while the large, stocky, poor egg-layers, like the Plymouth Rocks, Wyandottes, Orpingtons come from the Aseel or Malay fowl. By studying the *heredity* of fowl we discover which kinds are better egg-producers and which are more suitable for the table. Historically, the story of the distribution of poultry is worthy your attention. It is probable that Alexander the Great brought back from his expeditions to Persia some, and perhaps most, of the races of fowl "that first spread over Europe."

Descendants from the Aseel fowl were brought to America, so that we can trace our Asiatic breeds and many of our large breeds to Eastern India and China.

Let me suggest that during the cold month of February you study the hen and write out its history. If possible, add to this study the wild turkey and compare the history of these two important types of birds. Before spring comes, be prepared to name from pictures, or by visiting poultry-farms or poultry-shows, at least six races of poultry. Learn the difference between these

in pattern of plumage, comb, egg-production, size, and color. Do not be afraid to consult scientific magazines and poultry-books, for, although you may not be able to read them with complete understanding, you will find helpful pictures and many bits of useful and enjoyable information.

In connection with the increase of the meat-supply of the world, do your "bit" by first learning as much as possible about the common domesticated animals, and then, wherever opportunity offers, keep a pig, calf, small flock of hens, or a sheep.

Boys and girls who live in the country have the best chance, of course, to do this kind of nature-work, but there is no reason why pupils in the city should not know where the eggs, meat, milk, butter, and cheese they eat come from, and how they are produced. Any reports of pig or poultry clubs will be gladly received by the *School Department*; also, compositions on the hen and wild turkey.

We must strive to get our food-supply up to a point where we can say, as the observant writer, Torkington, did in his "Diarie of English Travell": "In this yle ys Plente of lambes, Gotys, [Goats,] motons, [muttons], and also hennys [hens], and capons." [A.D. 1517.]

SUGGESTIONS

1. Refer to the Encyclopædia Britannica, the Century Dictionary, Agricultural reports, and bulletins of the United States Department of Agriculture; also communicate with your State Agricultural College.

2. What fowl has white feathers and a dark blue skin?

3. What fowls have feathered legs, if any?

4. Did you ever hear of a fowl that had no tail? or of one that had no use of its wings? If so, where?

5. What kind of a call or song does the Jungle Fowl have?

6. Do chickens and turkeys like insects?

7. What diseases affect domesticated fowls?

8. Why are eggs so valuable to man as food?

9. Can you give the meaning of heredity, dower, production, domestication, and nutrition as used in this issue of the *School Department*?—A. H. W.

For and From Adult and Young Observers

SUGGESTIONS FOR JUNIOR AUDUBON CLUBS

By MRS. GRANVILLE ROSS PIKE, Yakima, Wash.

1 *Provide Water for the Birds.*

Make fountains in the school-grounds and home-lawns as soon as possible. Meantime, keep fresh water supplied in shallow vessels, above the ground-level, located near trees or shrubs. Observe what kinds of birds drink and bathe there. Keep a notebook and list all birds recognized at watering-places and elsewhere.

2 *Provide Cover for the Birds.*

Plant a bird-garden, having trees, shrubs, vines and plants that furnish food, shelter, and nesting-sites for the birds. In this garden include honeysuckle, scarlet runner beans, salvia, columbine, and other plants attractive to Hummingbirds.

Build and keep, the year round, in a retired corner or nook, a neat brush-pile as shelter and playhouse for the birds. Mold clay birds as decoys for fountains.

Learn to recognize birds by flight, movements, call, or song. Practise imitating bird-notes. Make whittled and sawed birds as bird-sticks, supports for vines and shrubs.

3. *Provide Food for the Birds.*

Collect in summer and fall an abundance of seeds, nuts, and berries. Notice what weed-seeds are especially liked by birds and harvest a large quantity of these. Grow a large quantity of sunflower and vegetable seeds. Dry, and grind seeds of melon, squash, and pumpkin. Save stale cornmeal or other cereals, also bread and cake crumbs. Collect wild berries, waste cherries, and other cultivated fruits, drying these for winter.

Write a record of foods eaten by birds on your premises, noting especially anything you can find out concerning kinds and numbers of insects eaten.

Make feeding-tables, cafeterias, shelters, food-cars, feeding-sticks, and other devices for serving food to the birds. Assist in maintaining, during winter, a chain of feeding-stations in the open for game- and other wild birds.

Place suet-holders on poles, trees, or buildings, well out of reach of dogs and cats. Photograph birds at watering-places, feeding-tables, and -stations.

4. *Provide Houses, Roosting-places, and Nesting Materials.*

Bird-houses should be well made, attractive in appearance, and adapted to bird-needs.

Erect a variety of houses suitable distances apart in well-chosen locations. Be sure that the houses are of proper proportions, dull in color, and that the openings are correct in size. There should be ventilation without drafts.

In the spring, nesting materials of grasses, leaves, string, horse-hair, wool, cotton, feathers, moss, or other soft materials should be furnished. This may be placed on bushes, trees, or brush-pile. It is interesting to observe which birds use these. Make a map showing location of nests in streets and nearby fields.

5. *Protect Birds from Dangers.*

See that birds on your premises are kept safe from cats, English Sparrows, and other enemies. Encourage others to assist in befriending birds. Observe whether or not women are wearing real or imitation feathers as hat-trimmings.

Care for wounded birds. Make a cemetery for those found dead. Write your game warden requesting a summary of State Game Laws.

Qualify as a junior game warden if you are eligible, and your game warden will furnish you with an official badge. Report to the game warden or commissioners if bird-protection laws are disobeyed.

Do not disturb birds during the nesting season. Most birds desert their nests if people visit them often or touch the eggs. Ground-nesting birds frequently come to grief because visitors make a trail which cats and other bird enemies follow and so find their nests.

Never catch birds learning to fly. The parent birds seldom find and feed little ones that have been carried away from their nests.

Hints for Bird-Study Club Programs and Activities.

Include in the club all pupils in the schoolroom, if possible, and organize as suggested in Audubon Leaflet.

Decide on a good special name for your club, and have pennant colors and club emblems.

Present attractive monthly programs centering about birds studied in the regular course. Give place also to reports of service rendered to the birds and to statements con-

cerning bird-needs, such as the proper time to plant bird-gardens, to put out nesting material, or to begin winter feeding. Bird-games are an important feature.

Occasional special programs should be provided, when bird specialists may be heard, or at which plays, pageants, debates, or mock trials concerning birds may be presented.

Furnish your local papers with accounts of club activities, timely information, and general bird-news.

Continue bird-club work if possible during summer, in the form of bird-hikes, picnics, and porch parties. Clubs should coöperate, also, making a notable event of the annual Bird and Arbor Day by erecting community bird-houses, feeding-shelves, and fountains. Members should participate also in story-writing and other contests.

Constitute your club an insurance company which issues policies covering preventable injuries and death to all birds in your district.

Collections may be made in autumn of vacated bird-nests. Arrange them in groups, accompanying with pictures of the former tenants. Bird-feathers, picked up here and there during molting season, make an interesting collection. Dennison's crepe-paper birds are much used for decoration.

Classified clippings and stories about birds make a valuable scrap-book.

Bird illustrations, photographs and colored pictures arranged in an album are enjoyed.

Posters, indicating birds observed each year by the club, a list of bird-books available in public or school library, a list of plants for bird-gardens, naming local bird enemies, or carrying legends along any line of bird interest should be prepared for school-room use.

Gather a schoolroom loan-library on birds by bringing albums, scrap-books, and bird-books owned by club members. Suggest bird-books as gifts for birthdays and holidays, consulting the Audubon Leaflets, BIRD-LORE, and other published lists for titles.

Write a courteous letter to the Department of Agriculture at Washington, D. C., requesting copies of Farmers' Bulletins, Numbers 760, 609, 630, 493 sent to your address.

Study real live birds, beginning with caged birds, Pigeons, or fowl in the school-room, next the common birds in your own dooryard, thus gradually extending your observation and service to the great world of birds in the wide, free, open air.

[Mrs. Pike, the author, has recently passed away, but her work as 'The Pioneer Bird-Woman of Washington State' will live long, for she organized hundreds of Junior Audubon Societies most successfully. The suggestive outline given above has been used and found of practical value in teaching bird-study, especially in the grades.—A. H. W.]

A BIRD-HOUSE CONTEST

The enclosed illustrations of bird-houses may be of interest to readers of BIRD-LORE in showing that interest in the welfare of our friends, the birds, is surely increasing.

They were produced by the coöperation of our very young but promising local Audubon Society and the pupils of the sixth and seventh grades of our public schools.

Both boys and girls competed, and some of the very clever houses, although not awarded prizes, were built by girls.

No suggestions were offered, and each house represents the individual



ORIGINAL DESIGNS OF BIRD HOUSES

idea of the builder. The prizes were awarded on the adaptability of each house for the needs of the birds it was built for.

Sufficient interest has been displayed generally, so that the teacher of manual training in the public schools will now direct the building of houses for the birds along approved lines of construction.

The present contest was held in March and preparations were immediately started for another on a larger scale in May, at which time more and larger prizes will be offered, all payable in Thrift Stamps.

In the present illustrations, No. 1 shows all the houses built; Nos. 2 and 3,



THREE HOUSES OUT OF THE TOTAL TAKING A PRIZE

the prize-winning houses and their builders.—O. B. MINOR, *Secretary of the Tuscarawas County Fish, Game and Song Bird Protective Association, New Philadelphia, Ohio.*

[In this and the following notes from adult and young observers, it may be seen that the boys and girls in our public schools are not only quickly interested in bird- and nature-study, but that their interest is genuine and needs only the spur of friendly competition, a little timely aid, or sympathetic approval to develop into a lasting asset in the sum of benefits which education is supposed to give the individual. The idea of offering Thrift Stamps as prizes is a good one.—A. H. W.]



THREE PRIZE-WINNERS

SUMMER, FALL AND WINTER OBSERVATIONS IN THE WEST

At this date, October 25, I am yet seeing many birds. Just now I see about 100 English and Chipping Sparrows in our backyard. Although they (the English Sparrows) are not very useful birds, they are always birds.

Just now a dark bird passed. It was flying in a waving manner.

Day before yesterday, I saw a Chickadee. It is a common bird here. Cardinals are common around here also. They stay winter and summer.

We have a very large lake near our house. In winter I see Teals, Mallards and many other birds. In summer I see Cormorants, Kingfishers, Water-hens, Hell-divers and Spotted Sandpipers in it. Cormorants are scarce in this part

of the country, but a doctor from St. Louis came out and killed one, so that is how I know it was a Cormorant. He had it mounted. It is a big black bird with a hooked bill for catching fish and a short, stiff tail to aid it in flying.

I see Hummingbirds here often. Some of the birds I see are Cardinals, Red-headed Woodpeckers, Red-winged Blackbirds, Crows, Bluebirds, Rose-breasted Grosbeaks, Barn Swallows, Owls, English and Chipping Sparrows, Cowbirds, House Wrens, Quails, Bobolinks, Thrashers, Orchard Orioles, Flickers, Mourning Doves, Blue Jays, Catbirds, Mockingbirds, Vireos, Redstarts and Pewees.

I wish that our teachers would join an Audubon Society. How fine that would be! Since we have no school on account of the influenza I have been studying birds.

I am in the eighth grade and go to the Point School. I enjoy studying and watching birds more than studying my school lessons.—ALICE CRECELIUS (age 12 years), *Jefferson Barracks, Missouri*.

[The Cormorant listed was probably either the Double-crested, or, possibly, a Mexican Cormorant which goes as far north as Kansas and southern Illinois. Brewer's Blackbird is a casual visitor in states bordering the Mississippi River. The 100th meridian marks about the limit eastward of the range of the Arkansas Kingbird. "Canary" may mean Goldfinch or Summer Warbler, usually, one says "Wild Canary" for these species; "Hell-diver" is a common name for the Pied-billed and some of the other Grebes; "Water- or Mud-hen" refers usually to the Coot. In studying birds it is a wise thing to learn the accepted as well as the common name of a species.—A. H. W.]

HOME OBSERVATIONS

I

This summer and spring I found a great number of birds' nests and saw the birds. We have an old stable which Sparrows and Swallows like to build nests in. Last summer a Sparrow built a nest in it and laid four eggs. Every egg hatched and all the young birds flew away. This year, a Sparrow built a nest right next to its last year's nest, but there was one egg left in it which did not hatch. All the others did and the birds were flying around for a long time. This year there were two nests near our house. One of them was destroyed by the cat as soon as the birds were a few days old. The other one was safe and I tried to see that the cat did not get it. I have seen many others but these are the ones I took most care of.—ROSA KRYSS.

[It is a fine way to study the birds nesting about one's home, and to help protect them.—A. H. W.]

II

Your magazine is always read with interest in our school, and the children are working with enthusiasm for the protection of bird-life since our Junior Audubon Class was formed. As I have not seen many letters from the Canadian West in BIRD-LORE, I thought perhaps the following details might be of

interest to yourself or your readers. The children (twelve in number, from five to twelve years old) kept a list of all the birds observed here (central Saskatchewan) during the month of September. They recorded in all forty-one species, which included such birds as the Cedar Waxwing, Loggerhead Shrike, Baltimore Oriole, Goldfinch, and several different Hawks, etc. Several of them I thought better to list as doubtful, since I had no other proof than the children's statements, that they ranged so far west. These were: Summer Tanager, Scarlet Tanager, and Indigo Bunting. We are hoping to find next year that they really are residents of this district.

I am enclosing two letters written by my scholars, when asked for a letter on things they had seen or done relating to the birds.

With every wish for your success in the splendid work you are doing.—
MARY F. YATES, (teacher), *Beresford School District, Kelliher, Sask.*

[The Indigo Bunting finds its widest distribution in the eastern United States, though it ranges west to the plains, casually to Colorado, and breeds as far north as Nova Scotia and Manitoba. A verified record of it in Saskatchewan would be of value but it is quite doubtful whether it ever goes as far northwest, unless accidentally. The Summer Tanager would be even less likely to occur so far north of its normal range. The Scarlet Tanager, like the Indigo Bunting, reaches Manitoba, and might possibly be found in South Dakota, but hardly farther northwest. Your method of interesting the pupils is excellent, and still more worthy of mention is the *interrogation mark after doubtful records*.—A. H. W.]

A BIRD-TABLE

This spring the scholars of Beresford school made a table for the birds. We all brought some wheat to school, and the crumbs left from our dinner we put on the table. Then we covered it over with leaves and some of the birds came and ate it. We put some wheat and crumbs on the table every day, and the birds like to eat off the table. There are quite a few birds in the woods opposite the schoolhouse. We hang some suet out for the Chickadees to eat.—HATTIE SAUNDERS.

[The idea of "camouflaging" the birds'-table with leaves is very interesting. Sunflower seeds, millet or various weed-seeds take the place of wheat and are probably preferred by most species of birds.—A. H. W.]

A HOME SANCTUARY FOR BIRDS

I have been subscribing for BIRD-LORE ever since Jan. 1, 1918, and I think it is a very interesting magazine, especially for bird-lovers and friends of birds. I have read everything in it thoroughly and some numbers I have read twice. I belong to the Nebraska Ornithologist Union.

January 15, 1918, two boy-neighbors and myself started a bird club for the protection and study of our song and insectivorous birds. We also set aside a patch of land of about six acres. We now have about thirty bird-houses and

six food shelters in our Sanctuary. We intend to feed the birds as soon as cold weather and snow set in.

I intend to join the Audubon Society as soon as I have money enough to become a life member.

The name of our Bird Club is Hillcrest Bird Club. I am the Secretary of the Club now. I would like to communicate with other readers of BIRD-LORE.—EWALD WITT, (Route 1), *Scribner, Neb.*

[Will some of our readers correspond with this enthusiastic worker, and exchange helpful experiences? This is the first home-sanctuary for birds, started by young people, that has come to the notice of the School Department.—A. H. W.]

NOTES ON THE LARK BUNTING

For three or four years I have taken a great interest in birds, and have noted the peculiar things about each one as I have seen it.

The most peculiar thing I have noticed is about the Lark Buntings. As far as I can remember, the Lark Buntings have just been seen in the fields north of Boulder every other year. Why this is, I have not been able to find out. Last year the Lark Buntings were plentiful in the fields, but this year not one was seen.

They have a beautiful song which is often uttered on the wing. One will be sitting on some bush and then will suddenly rise up in the air singing, and then will gradually come down to earth again, much after the manner of the Bobolink.—JEAN SUTHERLAND (age 13 years), *Boulder, Colo.*

[It would be wise to continue observations of the Lark Bunting until certain of its movements from season to season. Mrs. Florence Merriam Bailey gives a charming description of their habits in her "Handbook of Birds of the Western United States." She refers to their song, stating that they sing in chorus.—A. H. W.]

WINTER FEEDING OF BIRDS

I had always loved birds and was very sorry when they left us in the migrating season. On a Thanksgiving day, when the snow was silently falling, I heard a little Chickadee. Knowing that he was to be a winter resident, I decided to have him for my boarder. I went to work diligently for the remainder of the morning fixing a little feeding-station.

It took but a short time for the Chickadee to find refreshments. This is what I prepared for him: suet with chopped nuts, and doughnuts. The doughnuts I suspended from a branch, while I secured the suet by a wire to the tree.

Evidently the Chickadee reported about my feeding-station, for it was but a short time before a Nuthatch and Woodpecker came around. When more feathered friends came to patronize me I was encouraged and must have given them more because the Red-breasted Nuthatch and the timid Brown Creeper came. From then on I made a regular daily visit to the feeding-station.

I shall tell about the Chickadee first, as he is my favorite. He was the tiniest visitor and always sang his cheery *chick-a-dee-dee*. Even on the coldest and dreariest winter day he would cheer the disconsolate, piping his name. Often I tried to approach him, and after persevering I was one day rewarded by finding him perched on my hand.

The habits of the other birds also interested me very much. The Nuthatch family, instead of going up the tree for their meals, would proceed down the tree. None of the birds were able to hang on the suspended doughnut like the Chickadee, and consequently unless the doughnut were fixed purposely for them they would prefer the suet.

I continued feeding my winter visitors, and could not have derived more pleasure from anything than helping to save the few birds which remained with the northerners during the winter months.—ELIZABETH H. JOHNSON (age 15 years), *Plattsburg, N. Y.*

[Comment is not necessary here. Evidently the writer has discovered the true way of making friends with the birds and coming into intimate contact with them. Homework like this is of the greatest value, not only to the birds but to the bird-lover.—A.H.W.]



SAW-WHET OWL IN CENTRAL PARK,
NEW YORK CITY

Photographed by Albert Pinkus, (Boy Scout),
November 11, 1918

The Audubon Societies

EXECUTIVE DEPARTMENT

Edited by T. GILBERT PEARSON, Secretary

Address all correspondence, and send all remittances for dues and contributions, to the National Association of Audubon Societies, 1974 Broadway, New York City.
Telephone, Columbus 7327

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Any person, club, school or company in sympathy with the objects of this Association may become a member of it, and all are welcome.

Classes of Membership in the National Association of Audubon Societies for the Protection of Wild Birds and Animals:

\$5 annually pays for a Sustaining Membership
\$100 paid at one time constitutes a Life Membership
\$1,000 constitutes a person a Patron
\$5,000 constitutes a person a Founder
\$25,000 constitutes a person a Benefactor

FORM OF BEQUEST:—I do hereby give and bequeath to the National Association of Audubon Societies for the Protection of Wild Birds and Animals (Incorporated), of the City of New York.

SLAUGHTER OF AMERICAN EAGLES

The Territory of Alaska has entered upon a campaign to destroy all the Bald Eagles within its boundaries. A law enacted in 1917 by the legislature of the Territory reads in part as follows:

"Section 1. That there be, and hereby is placed upon every eagle within the Territory of Alaska, a bounty of fifty cents (\$0.50), said sum to be paid in accordance with the provisions of this Act.

"Section 2. To obtain said bounty, any person killing an eagle within the Territory of Alaska, after the passage of this Act, shall, as soon as possible, exhibit both feet of said eagle, to any United States Commissioner within the Territory of Alaska, together with a certificate in substantially the following form, etc."

As a result of an investigation we have learned that from the date of the passage of this measure, April 30, 1917 to December 6, 1918, a period of about nineteen months, bounties have been paid for 5,100 dead Eagles—an average of 266 a month!

In a letter recently received from a correspondent in Juneau, there occurs this statement:

"So far as I have been able to ascertain no specific information or statistics were presented to the legislature as a basis for

the passage of the bill, the basis for its enactment being upon statements by observers that in their belief the depredations of this bird were seriously affecting the salmon supply by destroying the fish while engaged in spawning in the small streams, that they also killed a great many fawns of deer, and young forest and shore birds, as well as ducks, geese, etc."

Thus another instance has come to light where a wild bird has been tried and condemned apparently without any previous scientific investigation as to the validity of the charges made against it.

The legislature that passed this law is not controlled by wild Indians and ignorant Eskimos, but by men who have migrated from the States and men who should know better than to condemn any form of wild life merely on rumors and the loose statements of prejudiced observers.

This is a sample of the kind of efforts the National Association of Audubon Societies has had to face in all parts of the North American continent for the past fourteen years. The fact that the battle is not yet won is indicated afresh by communications just received to the effect that some of the southern states will, during the present legislative year, seek to take from

certain birds the meager protection they now receive, on the grounds that the birds are more or less detrimental to the inter-

ests of mankind. It takes a long time to educate a hundred million people *and keep them educated!*

TWO REPORTS FROM TEACHERS OF JUNIOR AUDUBON CLASSES

From Fayetteville, Arkansas

I wish you could see my Boys' Bird Class, they are so courteous, alert and responsive. The ripple from the wave of interest we excited in our school spread into the town schools and resulted in the organization of a large number of children in Junior Audubon Classes, and even tiny tots outside of school are building bird houses.

Boys and young men in the neighborhood who have been suspected of killing Robins and other songbirds, have been approached, remonstrated with gently, and now understand fully the legal penalty for violating bird-protective laws. They were also invited to be present Bird Program Day. A movement of this kind was surely needed here for game and songbirds are rapidly disappearing. Robins are still shot for potpie the children say, but proofs are lacking. A young farmer came to me the other day to inquire if our Club (the name Audubon seems one to conjure with) could not get closed season for the Quail, which though once plentiful here are now scarce. I find this is one of the chief good of this class, to act as a centre of approach and information for bird preservation for the community.

We meet once in two weeks in my big livingroom, or outdoors with field glasses, if weather is fine, and talk over a subject assigned at previous lesson. The teacher is often the one taught, for these bright young eyes have learned their bird-lore in the woods and fields.

Our first lesson was on the 'Value of Birds to Field, Orchard and Garden.' The second on 'Migration.' One of the seed-stores here gave us some blank books and the boys used them for migration records. They have done some good work along this

line, and they enjoy it, for they say it makes them see more birds. Our last lesson was about 'Nests' and I believe the boyish desire for hunting birds' nests was gratified just as fully by the collection in the autumn of old nests for study. We found one rare one, a dove-shaped, beautifully made, softly lined one, with the tiny round aperture on one side: some kind of Warbler, probably the Blue-throated Warbler, we have decided.

Young people will not destroy anything which has become an object of sympathetic study and interest, and they need only a word in the right direction to make them the champions instead of the hunters of their feathered brothers. That belief has been the keynote of my work with them and I have required no pledge.

Boys so love to do things with their hands. At just a hint from me and showing pictures of the first lesson in regard to bird-boxes, in less than a week they each made several and brought them to me. Being not unmindful that the way to a boy's heart at least is through his stomach, I always have a little treat for them of doughnuts and cookies. We do have such good times together.—THERESA JENNINGS.

From West Point, New York

Bird-study for children at the West Point School has been carried on for some time, the general methods employed being as follows:

In the morning exercises, at the discretion of the teachers, reports are received and discussed concerning birds, known and unfamiliar to the one who makes his report. If the bird is known and has been previously discussed, its presence is made simply a matter of record. If the bird is unknown to most present, the various



BURYING A DEAD SPARROWHAWK, FOUND AND BROUGHT TO SCHOOL. MEMBERS OF JUNIOR AUDUBON CLASS AT HIGHLAND, NEW YORK

means of identification are resorted to, viz., size, color and markings, bill, call or song, mode of flight, manner of alighting, food-plants, etc. A discussion of these important and interesting facts is of distinct value to the pupil, in that it provides a source of information, and develops the powers of observation to a remarkable degree of keenness. If the description proves incomplete or unsatisfactory, the colored plate will often clarify the cloudy atmosphere which envelops the bird in the mind of the pupil. If good fortune prevails, the teacher may be able to identify the bird if it comes into view while both pupil and teacher are present.

The blackboard affords an excellent means of illustrating the various features of physical structure in the bird, thus rendering its identification less difficult by calling attention to the presence of certain dominant characteristics. If these are not present, then the process of elimination will narrow the list to a certain point where identification results in a positive form. On the blackboard drawings are so arranged that the bird's adaptability to its environ-

ment is made clear. At this juncture it is also made a matter of relative importance to emphasize the economic value of the bird to agricultural conditions, in addition to its beauty of dress, and sweetness of song.

During the winter, when the absence of foliage reveals readily the presence of the bird, and the lack of food supply forces it to seek more intimately the society of man, the children are then encouraged to feed and study the birds, making them their friends. The winter birds under the prevailing conditions are easily studied and quickly identified. The placing of suet in the trees and the scattering of grain upon the snow or ground creates in the child such an interest in birds that, by the time the great migratory waves of spring occur, he has grasped with an awakened interest the influences of an unknown and an unlimited number of species. Each season he is enabled to grasp and absorb a little more from the passing procession of northern migrants. The pupils are taught to reason that there must be a counter-migration in the fall.

For the many migrants which do not stay with us but which are wayfarers in flight, observation methods alone are used. For those birds which return to surroundings of former years, aid is extended in the building of houses for domestic purposes. Here the builder must be taught that precaution is necessary in guarding against the unlawful occupation of songsters' quarters by the English Sparrow. The size of entrance must be made small enough to exclude this unwelcome visitor and destroyer of homes. Many pupils have this spring provided houses for the birds, one or two being especially attractive and unique in design.

The older pupils under the supervision of school officers have studied the educational leaflets published by the National Association of Audubon Societies, and with water colors have made a copy of the finished plate on the sheet with the outlined drawing. By calling attention to essential details in structure and color much general, and some particular, knowledge is gained. The younger pupils who are not skilled in the use of water colors

are provided with crayons to acquire the shaded relations.—EDMUND COCKS.

Aigrette Violations

Although the Egret, from which the heron aigrettes are taken, cannot legally be killed in the United States, and although aigrettes can neither be imported into this country, nor sold in many states, one may still see many of these feathers worn.

The Conservation Commission of New York State has been active in its enforcement of this Audubon Law ever since it went into effect on July 1, 1911. Scarcely a month passes but what the Commission successfully conducts prosecutions of milliners who insist on violating the law by selling these feathers.

For example, during the month of December, 1918, there were five such prosecutions in New York. The Government has also taken a hand in this important subject. Mr. E. V. Visart, at one time the Arkansas agent for this Association, and now a United States game warden, reports:

"I know that you will be interested, to



BUILDING BIRD HOUSES. MEMBERS OF JUNIOR AUDUBON CLASS AT
HIGHLAND, NEW YORK

know that on December 3, 1918 I confiscated 122 dozen individual aigrettes and the back skins and aigrettes of six Herons. Total valuation was \$1,379.50. These were taken from Phil Levy, Hot Springs, Arkansas."

Olive Thorne Miller

Mrs. Harriet Mann Miller, better known as Olive Thorne Miller, died at her home in Los Angeles, California on Christmas Day, 1918.

Mrs. Miller was one of the first women in America to attain distinction as a student of bird-life and as an author of bird

twenty years in Chicago. Later her home for a long time was in Brooklyn, New York. Several years ago she moved to California, and there, in a little bungalow in a quiet part of Los Angeles, she passed her remaining years surrounded by trees and shrubbery, which furnished homes for many of the birds she so much loved.

I shall long remember her as I saw her in this home in 1912, a small, quiet woman with an alert mind, sitting in a rocking-chair on the veranda, and half playfully, half seriously seeking to frustrate my efforts to take a photograph of her.

Mrs. Miller was a writer of many magazine articles, and during her life delivered



JUNIOR AUDUBON CLASS AT BRIGHTON, NEW JERSEY

books. During 1896-1903 she was an active member and worker with Miss Emma Lockwood and others associated in the work of the New York State Audubon Society. Her interest in birds which began at an early date, continued until the time of her death in her eighty-eighth year.

She was born at Auburn, New York, June 25, 1831. After her marriage to Watts Todd Miller, at Rock Island, Ill., August 15, 1854, she resided for the next

numerous lectures. Her books, some of which are still sold extensively, are as follows: 'Nimpo's Troubles,' 'Little Folks in Feathers and Fur,' 'Queer Pets at Marcy's,' 'Little People of Asia,' 'Bird Ways,' 'In Nesting Time,' 'Four-handed Folk,' 'Little Brothers of the Air,' 'Our Home Pets,' 'Bird-lover in the West,' 'True Bird Stories,' 'With The Birds in Maine,' 'Kristy's Queer Christmas,' 'The Children's Book of Birds,' 'First Book of Birds,' and 'Second Book of Birds.'

Forbush's Monthly Bulletin of Information

Among the many useful efforts to encourage bird-study and bird protection that E. H. Forbush, State Ornithologist of Massachusetts, has set in motion is his monthly "Bulletin of Information."

The one for December, 1918 consists of six extra-large pages of mimeographed data regarding the more notable events in the distribution and migration in Massachusetts.

These bulletins are sent broadcast and much of the information they contain is copied by the public press. Mr. Forbush encourages people throughout the state to supply his office with data regarding the coming of migratory birds, their numbers and distribution. This, together with his own wide knowledge of the subject, forms a basis for these extensive notes. The Bulletin just issued is the twelfth that has thus far been published.

Letter from California

Mrs. F. T. Bicknell, of Los Angeles, writes:

"It is not from lack of interest that the Los Angeles Audubon Society is not taking part in the Christmas Census this year, but for the reason that so many of its members, upon whom we rely for correctly identifying the birds, have been, and still are ill, and not to be depended upon.

"Then, too, one of our largest 'birding' localities for shore-birds was drained this last summer and it has cut down our *productive* territory considerably, and will necessitate new lines of work. We hope by another year to adjust ourselves and enter into the contest with renewed energy and enthusiasm.

"On account of the Spanish influenza we have not been allowed to hold any indoor meetings this fall. We have had our regular field trips, however, with good attendance and are encouraged to feel there is no lack of interest. A little later we intend sending you the record of a new bird for our locality upon which we are now making

notes. I am working for BIRD-LORE subscriptions and hope to send names very soon."

A Christmas Card

The following poem, under the title, 'Brother Bird to Brother Man,' by Miss Gertrude Knevels, appeared on an attractive 'Christmas Greeting' sent out by the Forest Hills Gardens Audubon Society.

How big your nest is, neighbor Man,
How beautiful your fare,
While small birds in the wind and snow
Are starving everywhere.

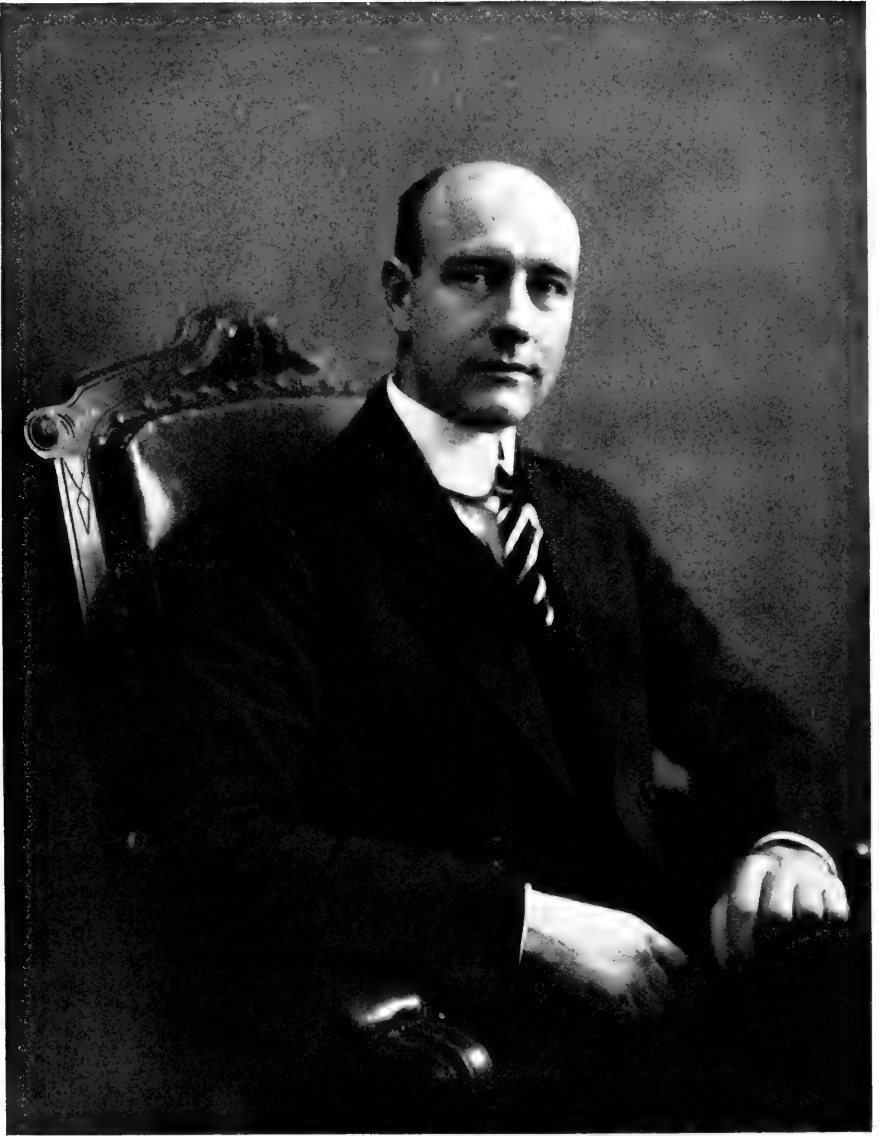
Some scattered crumbs, a little seed,
A drop of water too,
And we will sing our gratitude
Big Brother Man, to you.

Ruffed Grouse Scarce in West Virginia

But a few years ago the Ruffed Grouse, was fairly common throughout the hill region of West Virginia. Why it has become so very scarce in the last year or two is a mystery, but, nevertheless, it is true.

A party of three, hunting squirrels for three days in the mountainous part of Tucker County in September, reports seeing but two Grouse. Another party of three, hunting in the mountains of Webster and Randolph counties six days in November, reports seeing thirty-one Grouse. In both places there is an abundance of wild grapes, gum berries, beech nuts and other food for the birds. A few years ago Grouse were plentiful in these same areas. Some hunters killed a few Grouse and it was noticed that all the birds killed were males. One hunter reported that he had killed his quota of Grouse this year. Among the twenty-five birds was but one female. He had hunted over several counties and noticed that there were very few birds this year, whereas he had found them plentiful last year. It was also noticed that practically all the birds killed were old birds.

There seems to be a possibility that a large number of Grouse froze to death last



ROY C. ANDREWS
President Bronxville (N. Y.) Bird Club

winter. The female birds might have perished in this way, thus accounting for more males than females as well as the few young birds this year.—A. J. DADISMAN, *Morgantown, W. Va.*

Blackbirds and Meadowlarks in California

With unswerving regularity, worthy of a better cause, the question as to whether Meadowlarks and Blackbirds are a nuisance in California continues to be raised every year. At the coming session of the legislature, bills in all human probability will be introduced looking to the destruction of these birds. Somebody will again claim that Blackbirds are eating the grain and Meadowlarks are destroying the grape crop.

The California Audubon Society, ever watchful for the interests of the wild birds, has just issued a six-page pamphlet containing testimonies of some ranchers tending to show that the Meadowlark and Blackbird are of real economic value. This circular deserves to be given wide publicity and it is difficult to see how any legislator would approve of taking protection from these two birds after reading such an interesting document.

Success to the California Audubon Society in its legislative efforts this year and more power to Harriet Williams Myers, its active and resourceful Secretary!

New Sustaining Members Enrolled from October 19, 1918 to January 1, 1919

Abbott, Miss Ella L.
Adams, Silas B.
Armstrong, Edward E.
Beach, Miss Elizabeth T. E.
Bennett, Ernest P.
Benson, Mrs. Louis F.
Biddle, Mrs. Thomas M.
Billings, Mrs. C. K. G.
Bishop, J. E.
Blickensderfer, C.
Botsford, E. F.
Boyden, Harry H.
Brandt, Frederic F.
Breck, Frances S.
Brodland, Mrs. Lucas
Brooks, Mrs. Anson

Brown, Miss Mary L.
Buchanan, Genl. James A.
Burk, Mrs. A. N.
Campbell, Mrs. Stuart
Caster, Benjamin
Chanler, Mrs. Winthrop
Chapman, Mrs. Eustace
Cheever, J. S.
Christian, Miss Susan
Clark, Miss Mary T.
Clarke, Miss Mary S.
Congdon, Miss Frances
Cowling, Sarah F.
Curtis, Eva C.
Danielson, Mrs. Richard
Dillon, Fred N.
Dinsmoor, John C.
Easton, Mrs. N. Howard
Eckstein, Miss Babette
Edge, Mrs. C. N.
Ehrmann, Dr. Fred J. E.
Elliot, Sarah J.
Finch, Mrs. Gertrude K.
Fox, Miss A. M.
Franke, Mrs. Albert
Gardner, Mrs. Arthur F.
Hamann, William A.
Hayward, Miss Emma
Herrmann, F.
Hill, Mrs. J. A.
Hill, William H.
Hoover, Harris M.
Houghton, L.
Jennings, Philip B.
Kelly, Mrs. S.
La Boiteaux, Miss L. M.
Langdon, Roy M.
Legg, Mrs. J. Francis
Lindsey, Edward
Low, Mrs. Seth
Lyman, Miss Clara
McCarrell, Mrs. Robert L.
Mabie, Clarence
Madeira, Miss Elizabeth
Manning, Mrs. C. B.
Matheson, Mrs. W. I.
Mennen, William G.
Miller, Mrs. Ellen H.
Minnesota State Library
Minns, Master Frederick
Montgomery, Henry B.
Ostrander, Mrs. Charles L.
Partridge, Mrs. H. G.
Paul, Mrs. Gertrude, Sr.
Pease, Frank A.
Peterson, Charles S.
Pirie, John T.
Poole, Miss Grace H.
Porter, Mrs. Samuel
Potts, Master Harry
Richmond, F. E.
Riddell, Mr. and Mrs. B. H.
Rodgers, Miss H. T.
Rumford, Dr. Lewis
Rumsey, Bronson

Scattergood, Mrs. J. Henry
 Schwartz, Mrs. Morton L.
 Shaver, Mrs. B. F.
 Smith, C. B.
 Smith, Miss Henrietta A.
 Sprague, Major A. A.
 Stetson, Miss Charlotte
 Stewart, Robert L.
 Storm, Raymond W.
 Thresher, Henry G.
 Tomlinson, Mrs. Antoinette F.
 Townsend, J. W.
 Truesdale, Mrs. H. C.
 Turner, Richard G.
 Tuttle, Mrs. Harry A.
 Upham, Miss Edith S.
 Walker, E. Robbins
 Warner, A. L. D.
 Washburn, Mrs. Edward A.
 Welch, Mrs. E. L.
 Whitehouse, J. Henry
 Williams, Mrs. Norman
 Wilson, Mrs. C. M.
 Woolverton, William H.
 Wotkyns, Dana B.
 Zapp, Louis

Law for Migratory Birds Safe

A news dispatch, recently sent out from Washington, D. C., stating that the Government had dropped the case of appeal before the Supreme Court in reference to the constitutionality of the Migratory Bird Law, has led many people to understand that migratory birds are no longer protected by Federal statute. Such is not the case, however. What really happened was this:

The old Shauver case which had been pending for several years before the Supreme Court was finally disposed of merely for the purpose of clearing this dead issue off the docket. The treaty between the United States and Great Britain affecting migratory birds in the United States and Canada is much more comprehensive than the old Migratory Bird Law, and as the Enabling Act, making the treaty operative, was enacted by Congress July 3, 1918, those engaged in bird-protection took no further interest in the fortunes of the old Migratory Bird Law. The action of the Supreme Court, therefore, does not adversely affect in the slightest the Federal guardianship of migratory birds.

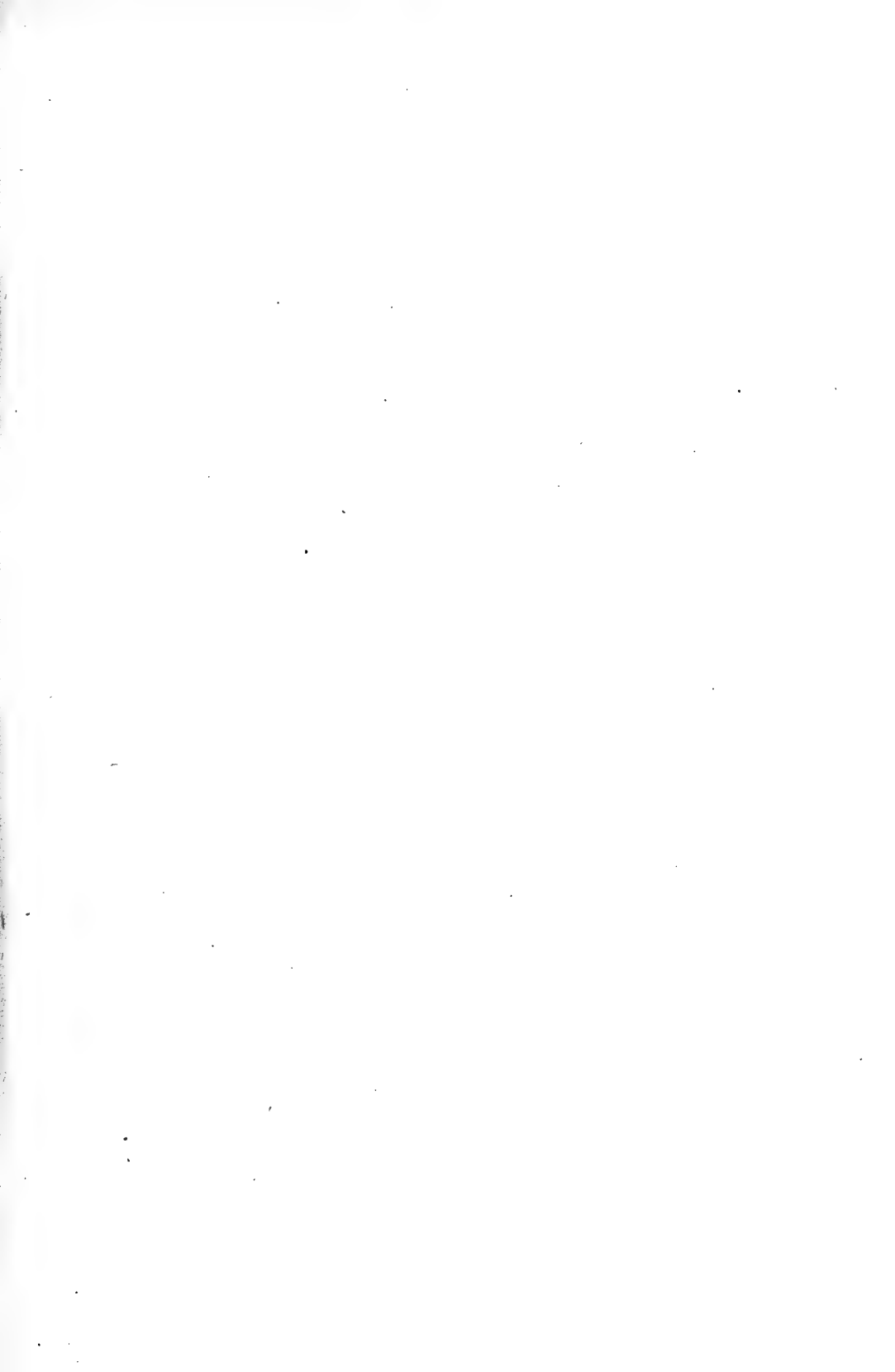
Bird-House Contest

The *Pittsburgh Chronicle-Telegraph* has opened its third annual bird-house contest. This closes on February 22, 1919. There are three first, second, third, and fourth prizes, allotted to different districts. The first prize in each case is a bicycle, the second, a chest of tools, third, a suit of clothes, fourth, a jig-saw; fifty additional prizes, consisting of gold Waldemar combinations, twenty-five to the winners within the city limits and twenty-five to those living outside the city. Any boy under sixteen years of age is eligible to enter the contest. Another special prize is a gold watch given 'for the most unique and serviceable bird-feeding station made according to dimensions as specified on the *Telegraph* dimension card. All requests for privileges to enter the contest should be addressed to T. Walter Weiseman, Bird-House Editor, *Pittsburgh Chronicle-Telegraph*, Gazette Square, Pittsburgh, Pa.

Notes from Washington, D. C.

The bill intended to prohibit the sale of game in the District of Columbia is held up and probably will not pass at this session of Congress. The measure went through the House of Representatives all right, but struck a snag in the Senate, for here it was referred to the Committee on the District of Columbia, the chairman of which, Senator Smith of Maryland, appears to be dead opposed to the enactment of such a measure for bird-preservation. Game-protectors and bird-lovers of Maryland have been bombarding him with letters to no avail. The efforts of the National Association to make Senator Smith see the light have alike proved unsuccessful. It takes a long time to get a Federal law when it comes to conservation.

Owing to the absence of Henry Oldys in France the publication of *Current Items of Interest*, by the District of Columbia Audubon Society, will for the present be discontinued. The Society is planning to continue its bird-walks this spring, as in years past.





1. CROW

3. FISH CROW
(About one-sixth natural size)

2. NORTHWEST CROW

Bird-Lore

A BI-MONTHLY MAGAZINE
DEVOTED TO THE STUDY AND PROTECTION OF BIRDS
OFFICIAL ORGAN OF THE AUDUBON SOCIETIES

Vol. XXI

MARCH—APRIL, 1919

No. 2

The Warblers of Central New York

By A. A. ALLEN, Ph D., Assistant Professor of Ornithology Cornell University
With Photographs by the Author



ON GUARD

The male Mourning Warbler has fed the young and is now waiting until he hears his mate coming before leaving.

THE fascination of the Warblers is irresistible. Their arrival in the spring awakens even the most callous ornithologist and pulls him out of bed before his accustomed time. Their bright colors, their great variety, their active habits, almost madden the beginner, as, in a frenzy, he follows their darting forms through the tree-tops or strains his neck in an effort to locate some lispng song. Years go by before the maze of plumages is straightened out and the songs finally remembered from spring to spring.

But he who follows the little fellows after they leave the gardens and shade trees and hide themselves in thicket, forest, and swamp, has a still greater enchantment before him. Decades may pass before he has traced them all to their abodes, learned all their breeding songs, and discovered the nest of every species. For bird-nesting is a time-consuming business. Days may be spent in a fruitless search of the undergrowth before the Mourning Warbler gives up its secret, and one's neck may feel

broken a hundred times from scanning the tree-tops before one finds the nest of the Blackburnian or the Cerulean. But what a joy it is at last to

discover the nest! The more difficult the search, the greater seems the reward. What a thrill passes over the searcher when a little greenish bird flutters from beneath his feet and he feels his patience rewarded!



A CERULEAN HOME

High in the trees, concealed with bits of lichen and woody fungi, the shallow nest is very difficult to find and still more difficult to photograph.

blems are presented for solution before one can secure satisfactory photographs, or even watch at close range the nesting habits of many of the Warblers.

The majority of Warblers, however, are less timid than most birds and this facilitates their study. Many species seem not to know fear about their nests. Indeed, in the case of one Blackburnian Warbler, shown me by G. A. Bailey, I had difficulty in keeping the bird off the nest long enough to photograph the eggs, even though I lifted her from the nest. The nest was about 25 feet from the ground in a small hemlock that swayed with the weight of my body and shook with my labored breathing. Indeed, the motion of the tree was harder to combat than the movements of the bird, and many failures resulted until I held my breath during the exposure. So it is with many and, perhaps, the majority of Warblers: there are some individuals of each species that seem devoid of the fear instinct. One needs to work with them for only

What a feeling of expectancy when a bright colored male Warbler hesitates for a moment near a dark spot among the leaves overhead and one climbs the tree to make sure that the nest is there.

If one is interested in photography, there is much satisfaction in planning the method of approach, the placing of the blind, or the fastening of the camera. It taxes one's ingenuity to the utmost. The nest may be fifty or sixty feet from the ground and far out on a branch. Usually it is in the deepest shade. The bird may be exceedingly timid, and one can always count on its being extremely active. Scores of prob-

a few hours before they become accustomed to one's presence and may even be coaxed to feed their young on one's hand.

There are some exceptions to this, however, chief among which is the Yellow-breasted Chat. Unlike the rest of its family in many ways, it carries its peculiarity in this respect to the extreme, so that it becomes practically an impossible subject for the photographer or the student of bird home-life. The slightest disturbance of the nest, or the leaves about it in discovering it, is apt to cause the birds to desert. Even with the maternal instinct at its height, when the young are fully fledged, they will leave them upon the slightest provocation.

In Central New York the Chats' nests are the most easily discovered of any of the Warblers, though, of course, they are far less common than many. They ordinarily nest about four feet from the ground in clumps of cornus, spirea, or viburnum, or other shrubs which grow in patches and which present a dense exterior but are sparsely branched and free from leaves on the inside.



THIS BLACKBURNIAN WARBLER PERMITTED ITSELF TO BE LIFTED FROM THE NEST

It is necessary merely to insert one's head beneath the crown of the bushes and a glance tells whether or not the bulky nest is present. Since both birds are rather noisy about the nesting grounds, the nesting area is easily located and there are usually not a great many possible nesting sites.

One spring we discovered twenty different nests of the Chat. They were built, however, by but seven pairs of birds, an average of nearly three nests per pair. Apparently something had happened time and again to disturb the birds

while they were incubating and they had each time deserted the nest and built a new one in the vicinity. Some of the deserted nests were empty, some contained one or two eggs, and some the full complement of four, our only way of knowing that the nests were deserted at the time of discovery being the finding of another nest in the vicinity containing warm eggs. Usually we were unable to discover the cause of desertion, but in two of the nests were the eggs of the Cowbird. The eggs of the two species are almost identical and yet the Chat seems to know the difference or to be able to count and remember the number



A TAME CHESTNUT-SIDED WARBLER FEEDING ITS YOUNG

which she has herself laid. I have known no instance of a Chat hatching out the Cowbird's egg.

A shy bird like this is very discouraging to the student of bird home-life for, when the mere discovery of the nest causes the bird to desert, it gives him not even a chance to test his skill. Upon two occasions, however, we were able to outwit the Chat by discovering the nests from a distance and not going near them until the proper time. One nest was located in an elm sprout close beside a cow-path and the bird had apparently become accustomed to the passing of the cattle. It was raining on the one day that we had a chance to photograph this nest and this, perhaps, caused the bird to stick closer. I set up my umbrella blind and my camera at a distance without disturbing her, and, getting inside,

I lifted the whole thing and lumbered slowly down the path to within six feet of the nest. She would have let me come closer but the nest was on a side hill and this was as close as I could get and still view the nest. Apparently she was accustomed to having cows grazing about her, for she paid no attention to any of the sounds coming from the blind. After making several exposures, I decided to leave without disturbing her and come back again after the eggs had hatched and family life had become more interesting. Instead of moving back up the path the way I had come, I whistled for my companion, thinking that if the bird were frightened from the nest by someone else, she would not suspect the blind of being anything but an inoffensive cow. It was a fatal mistake. My



A WOODLAND RESTAURANT

While the Black-throated Blue Warbler fed its young on my knee, the deer-flies and mosquitoes fed on my hand. The one made up for the other

companion had to approach very close to the bush before the bird would leave, in fact almost touch it. The bird left with considerable alarm and to the best of my knowledge never came back. We removed the blind but when we came again, a week later, the eggs were cold and the birds were calling about another thicket lower down the hill where we did not disturb them.

The other nest we discovered when the young were about to leave, and, since the old bird never left the side of the nest, I assume she thought herself undiscovered. The next day, before we went near the nest, we carefully concealed the camera in a box close to the ground, focusing it upon a prepared perch. The old bird was not near when we approached the nest but all of the

young fluttered from it in alarm. Before we had captured them all, one of the old birds returned, but, after scolding for a while, disappeared. Without delay we fastened the young in the grass beneath the perch upon which the camera was focused and concealed ourselves. After a while one of the old birds came back. We could not tell which one, but it was probably the other one, because only one returned; it showed no alarm, and, when it heard the food-calls of the young, it flew directly to the perch we had prepared. To get the Chat feeding its young and determine the nature of the food it was bringing was not so easy, for while we were placing them upon another perch, the old bird came back and caught us in the act. She told us very plainly in Chat language what she thought of such a proceeding, and waited two hours before she finally fed them and we secured the accompanying photograph.

Whether the Chats are as sensitive as this in all parts of their range I do not know, because there is a great deal of difference among individual birds. If we can judge from the particular branch of the tribe that lives about Ithaca, however, we would say that shyness is a species characteristic more strongly developed than in the Herons, Gulls, Skimmers, Doves, or any of the species that have a reputation for extreme timidity.

(To be concluded)



A CHAT BEFORE LUNCH

The youngster has waited two hours for this meal, and apparently registers disapproval. The Chat is the most difficult bird to photograph the writer has ever encountered

Notes from a Traveler in the Tropics

III. FROM PANAMA TO PERU

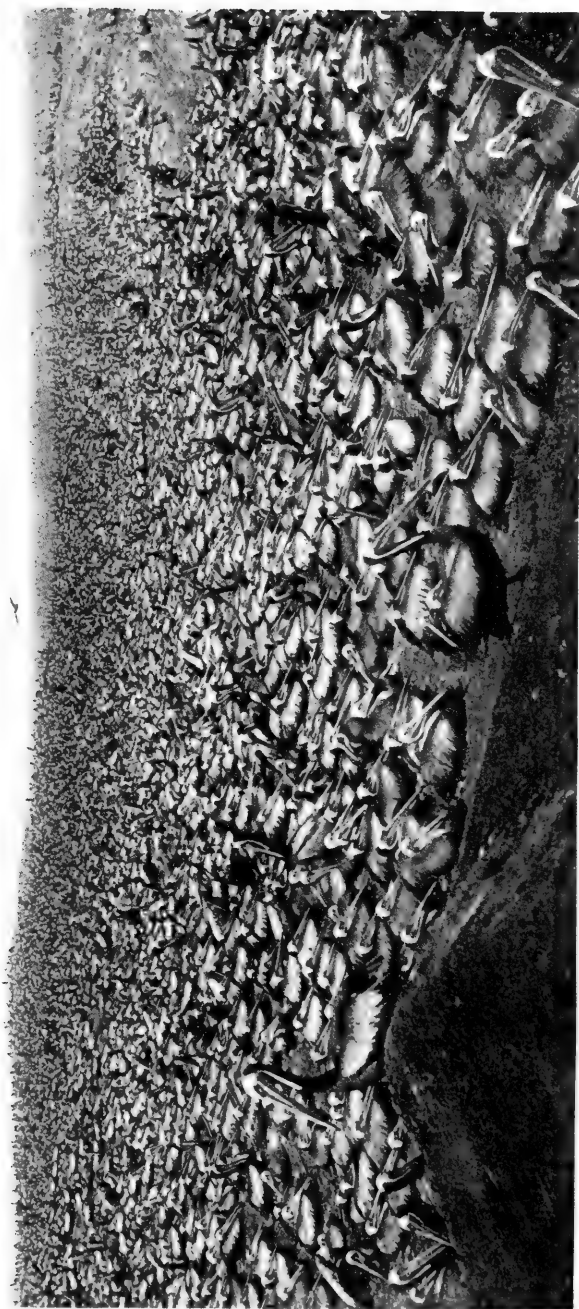
By FRANK M. CHAPMAN

EARLY on the morning of November 14, the S.S. 'Ucayali' of the Peruvian Line, left her moorings at Balboa and steamed slowly through the small gateway in the submarine nets guarding the Pacific entrance to the canal, which is closed nightly from 6 P.M. to 6 A.M. The beauties of Panama Bay with its islands, bare and wooded, the foothills and mountains of the surrounding mainland, the white towers and red roofs of Panama remain to become common knowledge; while the history of this region, from Balboa to Goethals, makes as strong an appeal to the imagination as do its physical features to the eye.

The waters abound with fish, and the air above them is correspondingly alive with birds. Nowhere else have I seen Man-o'-War Birds so numerous, while Brown Pelicans in stately files flew to their favorite fishing grounds. Some years ago a party of ichthyologists, whose desire for specimens was evidently stronger than their regard for the laws of angling, exploded charges of dynamite in these waters as the most direct means of making a census of their finny inhabitants, but when the shocked or killed victims came floating to the surface the Man-o'-War Birds and Pelicans proved so much more skillful as 'collectors' that the fish-men got a comparatively small share of the booty!

South of the equator, at just what point I am unable to say, but doubtless near the boundary line of Ecuador and Peru, the Brown Pelican is replaced by the Chilean Pelican, a related but distinct species; but, singularly enough, in spite of the abundance of food and the astounding numbers of birds off the coast of Peru, the Man-o'-War Bird was not observed south of Panama Bay. The absence of the Brown Pelican from the east coast of South America presents a similar inexplicable problem in distribution. During the succeeding two days few birds were observed. An occasional Shearwater or Petrel (*Æstrelata?*) was seen scaling over the waves in its unending and apparently fruitless search for food, but we were evidently not sailing over good feeding grounds. At 9 A.M. on the 16th we passed about ten miles to the east of Malpelo Islet, a rocky pile which loomed to surprising height above the horizon. Doubtless it is the home of many sea-birds, but, so far as I know, no naturalist has ever landed upon it.

At 7 o'clock on the morning of the 18th we were off Point Parina, the most western part of South America, and near enough to the shore to see the oil-derricks, which indicate the product of this barren coast. At 10 A.M. we reached Payta, our first port from Panama, and we were now fairly within the zone which distinguishes the Peruvian littoral as the home of countless hordes of sea-birds. There were Gulls, Cormorants, Boobies and Pelicans in amazing abun-



CHILEAN BROWN PELICANS NESTING ON LOBOS AFUERA ISLAND, NORTHERN COAST OF PERU
Photographed by Robert E. Coker; this photograph was reproduced in *The National Geographic Magazine* for May, 1914

dance. There is doubtless no area of equal extent in the world with a larger sea-bird population than the waters off this coast. Throughout its entire length of some 1,200 miles, birds are always present in large numbers, and when some unknown cause induces the small fish on which they feed to appear in a comparatively restricted area in incalculable myriads, there is a corresponding concentration of the feathered forms which prey upon them.

On November 20, when we were anchored off the port of Salaverry, it was obvious that we were in the center of such a gathering. Whether one looked north, east, south or west, birds could be seen in countless numbers passing in endless files, fishing in dense, excited flocks or massed in dark islands on the sea. If one looked toward the shore, where the bare, blazing sand-dunes smothered in smooth banks the base of coastal hills rising dark and desolate behind them, to be in turn overtopped by the distant Andes, long, waving, whip-like streamers and banners of birds passed in endless, undulating files sharply silhouetted against the atmospheric mountains.

Seaward, like aerial serpents, sinuous lines crawled through the air in repeated curves which lost themselves in the distance, or processions streaked the sky or water in rapidly-passing, endless files, flowing steadily by, hour after hour, during the entire day without ceasing, and with but slight breaks in the line. At times the flocks were composed of Cormorants, with, at intervals, an occasional white-bodied, brown-winged Booby. At others, they would be made up almost wholly of Boobies, accented here and there by a Cormorant, while for an hour or more Cormorants were passing northward some forty feet above the sea, and below them, low over the water, Boobies were flying southward, the head and tail of each procession being beyond the limit of vision. The Booby formation was less regular than that of the Cormorants, three or four birds often traveling abreast, and they passed at an average of three hundred per minute. It was not possible, however, to estimate from such observations the number of birds which passed a given point during the day, since the direction of flight was at times reversed as the birds sought new fishing-grounds.

These were near the shore, and the focal points toward which sooner or later, the birds converged, resulted in a scene to which no description can do justice. There was not a passenger aboard the ship who did not express his lively interest in it, and throughout the day it commanded untiring and often excited attention.

The Cormorants fished from the surface where they were evidently surrounded by a sea of the small fry, which, with much plunging and diving, they gobbled voraciously, until, their storage capacity reached, they rested in great black rafts on the water, waiting for the processes of digestion to give both excuse and space for further gorging.

The Boobies fished from the air, plunging headlong and with great force from an average height of fifty feet into the water almost directly. Like

a great flying spear-head they strike the water and disappear in the jet of foam which spurts upward as they hit the surface. It is a more thrilling, reckless performance than even the plunge of the Fish Hawk. The dive of a single Booby, like that of the Hawk, is always a notable exhibition of skill, strength, and perfection of the winged fisherman's art. Only a person rarely gifted in the use of words could adequately describe it. How, then, can one hope to paint a pen-picture of a thousand Boobies diving, of a skyful of Boobies which, in endless streams, poured downward into the sea? It was a curtain of darts, a barrage of birds. The water below became a mass of foam from which, if one watched closely, hundreds of dark forms took wing at a low angle to return to the animated throng above, and dive again; or, their hunger satisfied, they fled away with thousands of others to some distant resting-place. It is difficult to understand why the birds emerging from the water are not at times impaled by their plunging comrades, and how the Cormorants, always fishing on or near the surface, escape. But the most amazing phenomenon in all this amazing scene was the action of flocks of Boobies of five hundred to a thousand birds, which, in more or less compact formation, were hurrying to join one of the Booby squalls which darkened the air over the fishing-grounds. If, unexpectedly, they chanced to fly over a school of fish, instantly, and as one individual, every Booby in the flock plunged downward and in a twinkling the air which had been filled with rapidly flying birds was left without a feather! This spectacle, the most surprising evolution I have ever seen in bird-life, was witnessed repeatedly during the day.

We left Salaverry late in the afternoon, when the setting sun revealed an apparently endless succession of mountain ranges leading to the far-distant Andes, and seemed to light each with a different color—gray, pink, brown, or purple—and the birds were still waging active warfare against the inhabitants of the waters. But I could look at them no longer without experiencing a feeling of confusion and dizziness. For the first time in my life I had seen too many birds in one day!

November 19, off Eten, the first Albatross, a bird of the Yellow-nosed group, was seen; the following day a Skua was observed, and thereafter a few individuals of these species were seen daily. Diving Petrels and Inca Terns were not noted until we entered Lima Harbor on November 21.

It is, of course, well known that the combination of fish, fish-eating birds (transformers, they might almost be called), islands on which the birds may nest in security, and a rainless climate has resulted in the production of the guano deposits which have constituted one of the principal commercial assets of Peru. The Incas, who used guano to fertilize the areas they irrigated for agricultural purposes on the coast of Peru, are said to have imposed the penalty of death on anyone who killed a guano-producing bird; and the existing Peruvian Government rigidly protects them.

The original supply of guano has long since been removed and the industry

now consists in collecting the annual deposit. I have no figures at hand which will show what this amounts to, but a prominent Peruvian official informed me that a three-year deposit on one island amounted to 30,000 tons. The size of the island was not stated, but from Captain Richmond, of Mollendo, I learned that a comparatively small roosting-island—a pyramidal rock—furnished a thousand tons of guano yearly.

The remarkable photograph which is reproduced with this article, was made by Mr. R. E. Coker, of the United States Fish Commission, on the island of Lobos Afuera, off the northern coast of Peru some years ago. Mr. Coker at this time was making studies of the fish and of the guano-producing birds of Peru for the Peruvian Government. Much of the interesting data gathered by him have, I understand, not yet been published. If the information given me by Peruvian officials is correct, the remarkable Pelican photographs made by Mr. Coker could not now be duplicated. According to these gentlemen the Pelican is being replaced by the Booby—'Patita,' or little Duck, they call it. Boobies are said to be parasitic on Pelicans, robbing them of their food. I made no observations verifying this statement, but certain it is that thousands of Boobies were observed to one Pelican, and if both my memory and observations are not at fault, Boobies are more abundant and Pelicans less numerous than they were on the Peruvian coast in June, 1916.



WILSON'S THRUSH

Photographed by C. W. Leister, Ithaca, N. Y.

Purple Martins on Stuart Acres

FIVE YEARS OF BIRD-PROTECTION ON A MICHIGAN FARM

By F. A. STUART, Marshall, Mich.

With Photographs by Dr. W. H. Rowland

STUART ACRES is a tract of land in Eckford Township, Calhoun County, Michigan, extending from the Kalamazoo River on the north to Upper and Lower Brace Lakes on the south, and comprising altogether a little more than two thousand acres of land devoted to general farming, fruit culture, and livestock. The topography of the tract is sufficiently diversified with woodland, lowland, water courses and cultivated fields to make this section admirably suited for both land and water birds native to this climate. Bob-whites are plentiful except after severe winters, there are a few Ruffed Grouse and even a small flock of Pinnated Grouse (Prairie Chicken) now practically extinct in Michigan, besides a few breeding Mallards and Wood Ducks.

Articles on birds appearing in the National Geographic Magazine in the winter of 1913-14 aroused the interest of the writer in the protection and conservation of bird-life in general and of bird-house species in particular. Late in March, 1914 this early enthusiasm took tangible form in the erection of be-



"AT REVEILLE." JUNE 19, 1918

tween 300 and 400 bird-houses of every sort and description, from the small rustic Wren house to large logs of the Von Berlepsch type for Wood Ducks and Screech Owls and including ten Martin-houses. Previous to March 20, 1914, there were no bird-houses of any description, neither were there any Purple Martins, Tree Swallows, nor House Wrens.

Many bird-boxes have been added each season since 1914, until, at this writing, there are more than 1,400 on the whole estate; there were at one time (1916) over 1,600 houses, but about 200 have been removed because, for some reason or other, they were left unoccupied; it was a waste of time and labor to look after them, since it was very soon discovered that success with bird-houses meant regular, systematic attention for the removal of English Sparrow nests, this nuisance being the most serious obstacle to bringing back and re-establishing our native birds as far as bird-house occupants is concerned. There-

fore, every bird-box is examined every 21 days in the nesting season and an accurate report made of what is found, no account being taken of any nest unless it contains either eggs or young birds. Therefore, there is no guess-work either as to kind of bird or numbers, since no mention is made of incomplete or unoccupied nests; the reports of the four young men who make the regular inspections can be depended upon to be absolutely accurate.

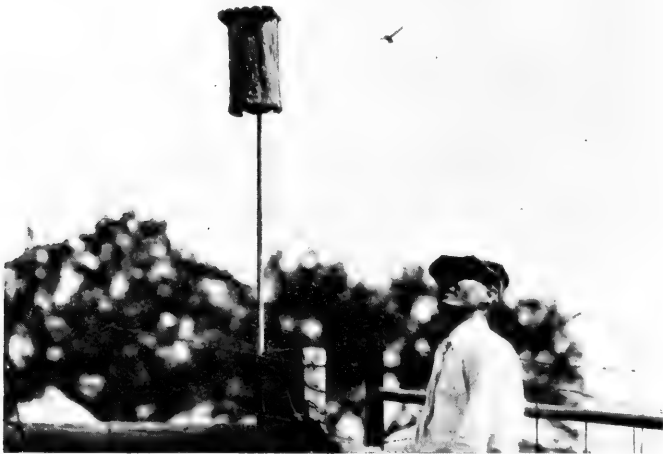
It might be of interest, but would require too much space, to relate in detail the experiences, successes, and disappointments of the five years past, but suffice it to say that results speak for themselves and briefly stated here they are. In the June inspection of 1914 there were 46 pairs of Martins in the 10 Martin-



STARTING OUT ON THE DAY'S WORK OF
INSPECTION
Removing House Sparrows' nests and other undesirables

houses, in the smaller houses 7 pairs of Bluebirds and 5 pairs of House Wrens made up the total of desirable bird-house occupants up to July 1, 1914.

In comparison, we found the following season, on May 3, 1915 inspection, 22 pairs of Bluebirds, every one of which brought off the young of the first brood and many more nests were found either incomplete or abandoned, of which no record was made. June 16, 1915 inspection showed in the 10 Martin-houses 117 pairs of breeding Martins, 16 pairs House Wrens, 12 pairs Tree Swallows, 8 pairs Flickers, 2 pairs Chickadees, 1 pair Crested Flycatchers.



TREE SWALLOWS FAVOR THIS TYPE OF HOUSE

Seventy-seven pairs had either eggs or young on Stuart Acres, in houses of this kind or similar to it on June 19, 1918

The next season, 1916, June 13 inspection showed 159 pairs Martins, 27 pairs Bluebirds, 21 pairs Tree Swallows, 9 pairs Flickers, 2 pairs Chickadees, 20 pairs House Wrens, 2 pairs Screech Owls, 1 pair Brown Creepers, 1 pair Tufted Titmice, 153 pairs English Sparrows.

The season of 1917, inspection of June 19, showed 190 pairs Martins, 46 pairs Bluebirds, 43 pairs Tree Swallows, 18 pairs House Wrens, 9 pairs Flickers, 4 pairs Screech Owls, 64 pairs English Sparrows.

For the present season the inspection made June 19, 1918, follows: 222 pairs Martins, 38 pairs Bluebirds, 77 pairs Tree Swallows, 4 pairs Flickers, 4 pairs Screech Owls, 1 pair Sparrow Hawks, 8 pairs House Wrens, 30 pairs English Sparrows.

Bluebirds and House Wrens are much fewer than in previous years, probably on account of the extraordinary severity of last winter, 1917-1918. In conjunction with the Game Warden's Department of the State of Michigan an

attempt is being made, during the present season (1918), to propagate the Ring-necked Pheasant, the result of which cannot be known until late this autumn.

List of birds seen on Stuart Acres or vicinity either as permanent residents, summer residents, or in spring and fall migrations:

Red-breasted Merganser	Kingfisher	Chewink
Hooded Merganser	Hairy Woodpecker	Cardinal
Mallard	Downy Woodpecker*	Rose-breasted Grosbeak
Green-winged Teal	Red-headed Woodpecker*	Scarlet Tanager
Blue-winged Teal	Northern Flicker	Purple Martin*
Pintail	Whip-poor-will	Barn Swallow
Wood Duck	Nighthawk	Tree Swallow*
Redhead	Chimney Swift	Bank Swallow
Bluebill	Ruby-throated Humming-	Cedar Waxwing
Golden-eye	Kingbird [bird]	Red-eyed Vireo
Bufflehead	Crested Flycatcher	Warbling Vireo
Ruddy Duck	Phoebe	Yellow-throated Vireo
Canada Goose	Wood Pewee	Black and White Warbler
American Bittern	Least Flycatcher	Yellow Warbler
Least Bittern	Prairie Horned Lark	Black - throated Blue
Great Blue Heron	Blue Jay	Warbler
Little Green Heron	Crow	Myrtle Warbler
Sandhill Crane	Bobolink	Chestnut-sided Warbler
Sora	Cowbird	Blackburnian Warbler
Coot	Red-winged Blackbird.	Black-throated Green
Woodcock	Meadowlark	Warbler
Jack Snipe	Orchard Oriole	Maryland Yellowthroat
Spotted Sandpiper	Baltimore Oriole	Yellow-breasted Chat
Killdeer	Bronzed Grackle	Redstart
Bob-white	Purple Finch	Catbird
Ruffed Grouse	American Crossbill	Brown Thrasher
Pinnated Grouse (Prairie	Redpoll	House Wren*
Chicken)	Goldfinch	Short-billed Marsh Wren
Mourning Dove	Vesper Sparrow	Long-billed Marsh Wren
Marsh Hawk	Lark Finch	Brown Creeper*
Sharp-shinned Hawk	White-throated Sparrow	White-breasted Nuthatch*
Cooper's Hawk	White-crowned Sparrow	Red-breasted Nuthatch
Red-tailed Hawk	Tree Sparrow	Tufted Titmouse*
Red-shouldered Hawk	Chipping Sparrow	Chickadee*
Sparrow Hawk*	Field Sparrow	Golden-crowned Kinglet
Barn Owl	Junco	Ruby-crowned Kinglet
Screech Owl*	Song Sparrow	Wood Thrush
Yellow-billed Cuckoo	Swamp Sparrow	Robin
Black-billed Cuckoo	Fox Sparrow	Bluebird*

NOTE.—There are doubtless many other species, especially water-birds in migration, which frequent the tract, but with which the writer is not sufficiently familiar to be sure of the identification.

Species checked (*) in above list are those which have at one time or another occupied the bird-houses. The Tufted Titmouse and Brown Creeper but once, however.

Another Purple Martin Roost in the City of Washington

By HARRY C. OBERHOLSER

OUR experience during 1917 with the Purple Martin roost in the city of Washington aroused a natural curiosity regarding the birds' return in 1918. Nor was this expectation doomed to disappointment, for the birds appeared considerably earlier than in the previous year, and like the city's war workers, in ever-increasing numbers. In many respects they were so different this season that some further notes seem worthy of permanent record. Comparison with their behavior in 1917 can readily be made by consulting the writer's account in last year's *BIRD-LORE*.*

As is well known, great changes have taken place in the capital city of our country during the past year. War conditions have made necessary the occupation of park space by temporary buildings. Several such structures have been erected along 4th Street in the Mall, close to the very trees in which the Purple Martins roosted in 1917. Either on account of this environmental change or for some more obscure reason best known to themselves, the Purple Martins, likewise the Purple Grackles and European Starlings, abandoned the former roost and chose a spot about a mile farther west, on 17th Street, N. W., at the western edge of that part of the Mall called the 'White House Ellipse'. The other surroundings are very different from those of 1917. Just across 17th Street stands the Red Cross Building, the steps and portico of which afford an unobstructed and exceptional view of the tops of the trees used as the Purple Martin roost. Indeed, the opportunity for observation could hardly have been more favorable. This part of 17th Street has no electric car lines, but is a favorite thoroughfare for automobiles and pedestrians. South of the Red Cross Building, on the same side of the street, is the Pan-American Building; and north of the former, but on the opposite side of the street, is the State, War, and Navy Building, from which latter, to the Navy Annex, there stretch, high across 17th Street, the wires of the naval wireless telegraph station. Seventeenth Street is here lined on both sides with good-sized trees, principally elms and sycamores. The Purple Martin roost was situated in a small clump of thirteen trees, thirty or forty feet in height, all elms, except one box elder, and standing close to the broad sidewalk over which some of them spread. The birds commonly used only seven or eight of these trees, but, when an unusually large number of birds was present, occasionally as many as ten.

This roost was occupied by the Martins for the first time on July 19, 1918, and every day thereafter for more than a month. The daily arrival of the first few birds in the vicinity of the roost varied from twelve to thirty-three minutes before sunset—on August 1, this occurred at 6.50 P.M. (actual standard time), on August 24 at 6.32 P.M. and during the succeeding half hour the number rapidly increased up to the time of entering the roost. A part of the

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birds, from 100 to 2,000 or 3,000, as they arrived, sought the wireless telegraph apparatus, where they perched close together on the wires, and even lined the nearly vertical wire supports. This took place on nearly every evening, though occasionally all the birds remained in the air; at times they would all suddenly leave the wires as though by a common impulse, circle around in the air, and either return or enter the roost. On a few evenings they were observed resting in numbers also on the cornices of the various buildings in the vicinity. The birds that remained in the air would course leisurely about in all directions, covering a wide area, and, as the number increased, would form a more compact company, usually directly over the roosting place, sometimes high in the air, sometimes low, rarely ever moving very swiftly or as a unit until time for entering the roost arrived.

Up to about the middle of August there were commonly 3,000 to 5,000 Martins in the air when, each day, the rush for rooms in the Martin hotel began. This took place from seven to twenty-one minutes after sunset, according to the state of the weather—at 7.20 P.M. on August 1, and at 7.10 P.M. on August 20. The entry was usually made rapidly and continuously after once begun, but on one occasion, August 9, it was twice interrupted for several minutes after a few at each time had begun to roost. During the first half of August the birds entered rather gradually, slowly circling or flying aimlessly low over the roost, then suddenly dashing into the trees, often with great swiftness. After the first rush, which usually consisted of the birds lower down, those from higher up, sometimes many hundreds of feet in the air, would, with wings nearly closed and rigidly set, begin to drop, each like a miniature *aéroplane* in a tail-spin, nearly vertically into the roost, and check themselves when only a few feet above the tree-tops. During these proceedings streams of other Martins continued to arrive, coming almost entirely from the west and south, singly and in small flocks, for several minutes at a rate of 2,000 or more a minute, then in gradually diminishing numbers for several minutes longer; flying leisurely at first, but, as the daylight waned, at a rapidly accelerating speed, as though fearful of arriving too late for a lodging place. During the latter part of August, however, the character of the flight materially changed, for the birds more and more collected into a well-defined flock, which performed its *aërial* evolutions more as a unit, and rarely entered the roost until all the stragglers had arrived; when, swarming over the tops of the trees, sometimes low down, sometimes at a great height, in rapidly moving circular form or otherwise, on one occasion even in the form of a huge inverted cone, like the cloud of a tornado, the birds, in great numbers, sometimes many thousands together, would dash with great speed directly down into the trees. The time occupied by this performance was only from three to five minutes, whereas during the early part of August, when the birds entered as they arrived, this extended over a period of from twelve to thirty minutes. The last straggler was safely housed by twenty to thirty minutes after sunset—on August 1,

at 7.32 P.M., and on August 24, at 7.13 P.M. Unlike all the other hostelries in war-crowded Washington, this Martin lodging-house seemed to have plenty of room for all comers. The birds appeared restless for some time after settling into the trees, and sometimes, particularly when roused by the firing of a gun, the clapping of hands, or other sudden noise, would rise in numbers and circle over the tree-tops, soon, however, dropping into their places again. There was, also, more or less moving about among the branches of the trees, as many of the birds exchanged their places for others apparently more to their liking. During the early part of August, they were exceedingly noisy, and continued their chattering well into the night, usually later than 10 P.M.; but as the month waned they gradually became more silent and often scarcely uttered a note after all had entered the roost. At first a large proportion of the birds were adult males, but later on their places were taken almost entirely by females and young.

Purple Grackles and European Starlings roosted in the trees adjacent to those occupied by the Martins, but the number of the former was never over 150, of the latter not over 100, and both of these species gradually diminished in numbers and finally disappeared from the vicinity while the Martins were still there. The same is true of the Bank Swallows, of which on August 5, there were 250 roosting in the same trees with the Martins, though on no other occasion were there over 40, and usually a much smaller number. These Swallows always appeared just as the last few of the Martins were entering the roost, and immediately sought places among the trees. Often they came in after the last of the Martins, sometimes as much as ten minutes later. A small flock of about 100 Chimney Swifts resorted to a chimney near the Martin roost on the evening of August 20, though their presence doubtless had little or no connection with the Martins.

The writer is indebted to Mr. R. M. Barr, night superintendent of the Red Cross Building, for interesting particulars concerning the actions of the Purple Martins at the roost after dark. On July 25, about 8 or 9 o'clock in the evening, the birds were evidently much disturbed by a heavy thunder-storm, for after every brilliant flash of lightning followed by heavy thunder they rushed from the trees in great clouds, flew wildly about for a short time, and then settled into the roost again. The same performance was repeated a number of times during the course of the storm. This observation is of considerable interest, for we have comparatively little accurate information regarding the behavior of birds of any kind during the hours of darkness.

On August 21 the roost was visited early in the morning for the purpose of ascertaining when the birds departed. Before 4 A.M. (actual standard time) the Martins were entirely silent, and we heard their first note at 4.03 A.M. Subsequently no sound came from them until 4.35 A.M., when a chorus began which continued with scarcely a break thereafter. At 4.40 A.M. the birds became somewhat restless and commenced to move about from branch to branch

among the trees. The first took wing from the roost at 4.55 A.M.; five minutes later a flock of about 1,000 dashed out suddenly in a horizontal direction through the trees, then circled about in the air above the roost for a few minutes, when they disappeared. At 5.02 A.M. about 3,000 or 4,000 left in the same manner, not rising above the tree-tops, but sweeping through the branches as though aiming to escape observation. The birds continued to leave in greater or less numbers until 5.15 A.M., when the last individual departed.

The number of Purple Martins that occupied this roost was considerably greater than in 1917. The birds first appeared in 1918 in comparatively small numbers, but rapidly increased during the latter part of July and early August until they reached the maximum of 35,000 on August 9; after which, with more or less fluctuation, they gradually diminished in numbers until August 20 when about 12,000 were present; and subsequently the number still more suddenly dropped to 150 on August 24, which was the last day of their occupation of the roost at the Red Cross Building. On that evening some 500 to 600 were seen passing overhead, coming from the west and going in the direction of the Capitol grounds.

Whether or not the birds were disturbed by the many people that visited the vicinity of the Red Cross Building to watch them, it is difficult to say, but certain it is that the Martins left this location after August 24 and took up their nightly abode in some elm trees over the street-car track near the corner of B Street and Delaware Avenue, S. W., on the edge of the Capitol grounds. About a thousand birds had, however, about the middle of August roosted, but only for a night or two, in some sycamore trees at the Pan-American Building, not far from the main gathering.

At the Capitol grounds not more than 800 birds assembled: these usually came in a single flock, and without previous evolutions swept downward from a considerable height into the trees. This roosting place was very similar in character to the one of 1917 in the eastern part of the Mall. In this secondary roost the birds remained until the night of September 19, on which occasion their numbers had decreased to about 100. On September 20, a cold rainy day, the birds disappeared, and have been seen no more. This, however, is a new record for the autumn stay of the Purple Martin about Washington, the previous latest date being September 14, 1889.



The Migration of North American Birds

SECOND SERIES

IX. CROWS

Compiled by Harry C. Oberholser, Chiefly from Data in the Biological Survey

AMERICAN CROW

The common American Crow (*Corvus brachyrhynchos*) is one of our best-known birds. In one or another of its forms, it occurs at some season over practically all of the United States and over all but the northernmost parts of Canada. It is, however, of more or less infrequent occurrence in the arid parts of the western United States. In the northern portion of its range it is only a summer resident; almost everywhere else it remains throughout the year. It is divided into five geographic races, the ranges of which are given below. In the A. O. U. check list the Southern Crow is included with the American Crow; and the Northwestern Crow appears there as a full species.

The **American Crow** (*Corvus brachyrhynchos brachyrhynchos*) breeds in northeastern North America, north to Newfoundland, central Quebec, central Keewatin, and northwestern Mackenzie; west to northern Alberta, Minnesota, and northwestern Texas; south to north central Texas, Missouri, Iowa, and New Jersey. It winters from about the northern border of the United States south to a short distance beyond the southern limit of its summer range.

The **Southern Crow** (*Corvus brachyrhynchos paulus*) is resident in the eastern United States, north to Maryland and southern Illinois, west to eastern Texas, and south to the coast of the Gulf of Mexico and to northern Florida.

The **Florida Crow** (*Corvus brachyrhynchos pascuus*) is confined to the southern portion of Florida, where it is permanently resident.

The **Western Crow** (*Corvus brachyrhynchos hesperis*) is resident in the western United States and southwestern Canada, north to Montana and central British Columbia; west to central Washington and western California; south to Wisconsin and New Mexico; and east to New Mexico and North Dakota.

The **Northwestern Crow** (*Corvus brachyrhynchos caurinus*) is resident on the Pacific slope of northwestern North America from Kadiak Island and the Alaska Peninsula, Alaska, south to Neah Bay in northwestern Washington.

In the following tables, records of the Western Crow are marked with an asterisk (*); all the others refer to the common American Crow.

SPRING MIGRATION

LOCALITY	Number of years' record	Average date of spring arrival	Earliest date of spring arrival
Schuyler Lake, N. Y.....	5	February 15	January 31, 1889
Oswego, N. Y.....	16	March 6	Rare in winter
Charlotte, Vt.....	12	March 1	Rare in winter
Rutland, Vt.....	10	January 24	Rare in winter
Wells River, Vt.....	8	February 26	February 16, 1912

SPRING MIGRATION, continued

LOCALITY	Number of years' record	Average date of spring arrival	Earliest date of spring arrival
St. Johnsbury, Vt.....	17	February 19	January 7, 1915
Hebron, Maine.....	9	February 5	January 10, 1910
Phillips, Maine.....	13	February 25	January 18, 1913
Orono, Maine.....	9	February 24	January 2, 1896
Ellsworth, Maine.....	4	March 4	February 24, 1911
Montreal, Quebec.....	17	March 3	January 1, 1889
Quebec, Quebec.....	16	March 10	March 2, 1894
Godbout, Quebec.....	4	March 11	March 9, 1885
Chatham, N. B.....	19	March 16	Rare in winter
Scotch Lake, N. B.....	19	March 9	February 16, 1905
Lansing, Mich.....	6	February 23	Rare in winter
Ann Arbor, Mich.....	28	February 21	Rare in winter
Bay City, Mich.....	11	March 7	January 21, 1889
Newberry, Mich.....	8	March 7	January 31, 1916
Houghton, Mich.....	8	March 7	February 4, 1914
Listowel, Ontario.....	17	February 25	February 8, 1894
Queensboro, Ontario.....	9	February 22	January 2, 1908
Ottawa, Ontario.....	31	February 21	January 1, 1894
La Crosse, Wis.....	5	February 28	February 15, 1907
Zumbrota, Minn.....	11	February 18	January 24, 1889
Minneapolis, Minn.....	11	March 6	February 3, 1906
White Earth, Minn.....	4	March 2	January 5, 1882
St. Vincent, Minn.....	2	March 11	February 24, 1896
Killarney, Man.....	9	March 19	March 1, 1915
Aweme, Man.....	20	March 23	February 25, 1911
Reaburn, Man.....	11	March 27	March 15, 1895
Lac du Brochet Post, Man.....	16	April 16	April 6, 1889
Qu'Appelle, Sask.....	16	March 25	February 24, 1905
Flagstaff, Alta.....	10	March 26	March 12, 1916
Ft. Chipewyan, Alta.....	4	April 11	March 25, 1886
Ft. Providence, Mack.....	2	April 22	April 20, 1888
*Grafton, N. D.....	7	March 20	March 13, 1914
*Bathgate, N. D.....	7	March 28	March 15, 1896
*Terry, Mont.....	6	April 14	April 1, 1905
*Great Falls, Mont.....	12	April 7	March 26, 1915

FALL MIGRATION

LOCALITY	Number of years' record	Average date of last one observed	Latest date of last one observed
Schuyler Lake, N. Y.....	2	November 15	November 21, 1885
Rutland, Vt.....	3	December 1	Rare in winter
Hebron, Maine.....	9	November 23	December 24, 1909
Phillips, Maine.....	10	November 23	December 28, 1912
Orono, Maine.....	3	October 16	Rare in winter
Ellsworth, Maine.....	2	November 6	Rare in winter
Montreal, Quebec.....	10	November 8	Rare in winter
Quebec, Quebec.....	2	October 16	Rare in winter
Scotch Lake, N. B.....	9	November 23	Rare in winter
Detroit, Mich.....	4	December 9	Rare in winter
Newberry, Mich.....	6	October 24	November 4, 1914
Calumet, Mich.....	5	October 5	October 21, 1910
Listowel, Ontario.....	3	November 5	Rare in winter
Ottawa, Ontario.....	16	November 4	Rare in winter
Zumbrota, Minn.....	3	November 11	November 25, 1890
White Earth, Minn.....			December 10, 1881
St. Vincent, Minn.....	3	October 10	October 20, 1895
Killarney, Man.....	9	October 11	November 2, 1909
Aweme, Man.....	18	October 19	November 7, 1907

FISH CROW

The Fish Crow (*Corvus ossifragus*) is permanently resident in the Atlantic Coast and Gulf regions of the eastern United States, ranging back from the coast at least to the Blue Ridge Mountains, and from Connecticut and the lower Hudson Valley, New York, the Delaware Valley in New Jersey, the Susquehanna Valley in Pennsylvania, and the Potomac Valley in Maryland, south to the whole of Florida, and west along the Gulf Coast to southeastern Texas. It is also of casual occurrence north to Massachusetts.

ROOK

The familiar European Rook (*Corvus frugilegus*), as a species, breeds in most of Europe excepting the extreme southern part, and ranges east to China and Japan; in winter, also south to Formosa, northern India, and northern Africa. The typical subspecies is North American only by reason of its accidental occurrence at Kangarsik, near Cape Dan on the eastern coast of Greenland.

HOODED CROW

The well-known hooded crow of Europe (*Corvus cornix*), in some one of its several forms, breeds over Europe except the southwestern portion, and south to Egypt, Syria, Mesopotamia, and Afghanistan, and east to Turkestan and western Siberia, wintering also south to northwestern India and to Spain. The typical race is included in our North American list on account of its having been taken at Angmagsalik on the eastern coast of Greenland.

Notes on the Plumage of North American Birds

FIFTY-THIRD PAPER

By **FRANK M. CHAPMAN**

(See Frontispiece)

American Crow (*Corvus brachyrhynchos brachyrhynchos*, Fig. 1). The plumage of our Crows, like that of their large counterparts, the Ravens, does not vary significantly with either sex or age. The eastern American Crow will serve as an example for them all. Adult males and females are alike; when it leaves the nest, the young bird has the body plumage, that of the under parts especially, duller and browner than the adult. This body plumage is changed at the post-nuptial molt, and thenceforth it resembles its parents.

Notes from Field and Study

A Belated Census from Belgium

I made a bird-census today (December 24, 1918) as I have often done out here before to remind me of my old life—soon to be taken up again. Notice the preponderance of the *Corvidæ* in this list; this is what keeps the bird-life down here.

9 A.M. to 12 M.; temp. 30° to 40°; light south wind; fine. Distance covered 7 miles, woods and open cultivated country. Gray Partridge, 46; Pheasant, 2; Wood Pigeon, 2; Green Woodpecker, 1; Skylark, 6; Magpie, 14; Jay, 1; Carrion Crow, 12; Hooded Crow, 8; Rook, 215; Starling, 12; House Sparrow, 55; Tree Sparrow, 2; Chaffinch, 18; Greenfinch, 1; Linnet, 1; Yellow Bunting, 2; Tree Creeper, 1; Greater Titmouse, 9; Blue Titmouse, 15; Marsh Titmouse, 2; Golden-crested Kinglet, 2; Blackbird, 2. Total, 23 species, 429 individuals.—ALLAN BROOKS, *Jauche* (20 miles southeast of Brussels), Belgium.

Robins Enjoy Flat Life

One by one the birds that formerly nested in our neighborhood disappear. They come at springtime,—Oriole, Wren, Cuckoo, Thrasher, 'Yellowbird' and a few others—but such changes affect the city, such tearing down of old buildings and erection of new ones, such elimination of door-yards and shade trees, that they do but regale us with a sad song or two and bid us farewell. But not so the Robin. That most adaptable of birds which, whether on the farm or in the suburbs is well content to join its architecture to that of man, now accepts the encroaching city in the same spirit.

The pictures accompanying show a Robin's nest in which a brood of four was successfully raised in spite of the interest of a dozen families and the apartment building janitor. No family of Robins was ever offered a more unusual menu than was comprised by the dainties set

out on the posts and railings of the court porch of which one picture gives a general view.

The building, a new one, of three stories, completely encloses the court. There are no trees or green open spaces, except the



ROBIN NEST IN THE CITY

parkway lawns, in the immediate vicinity. But Robin saw on the joist supporting the floor beams of the top-story porch an ideal nesting-site and the result justified the selection.—E. R. FORD, *Chicago, Ill.*

Robin's Nest on a Wren-House

Our neighbor built for us an attractive little birch-covered bird-house, 'bungalow style,' with a porch and overhanging roof. We put it up under the eaves of the house, just about the time we thought the Wrens would appear. But before any of their kind had been seen, a Robin spied the structure. She was evidently a city Robin, for she was at once attracted to the modern little house we had put out for 'Jenny'

Wren, and she immediately proceeded to tenant the 'upper flat'—in other words, she began at once to build her nest on the roof of the bungalow. Here she lived



ROBIN'S NEST ON WREN HOUSE

happily and reared her family of four, which have now flown away. In the accompanying print you see her feeding the babies.

Our Wren failed to appear. Maybe the family upstairs were too noisy to suit her tastes!—ESTHER DE BOOS, *Madison, Wis.*

An Unusually-placed Robin Nest

I think that the readers of BIRD-LORE would like to see a photograph of a Robin's nest in what looks to me like an unusual place.

The nest was begun on May 15, 1917, but when nearly completed, it slid over the edge of its support and remained hanging from the electric-light wires—as shown in the picture. The Robins soon went to work and built another one above the old one. On May 21 both Robins disappeared and did not return till

June 11. In their absence, upon looking into the nest, a single egg was found. This egg was not disturbed. When the birds returned on June 11, they put a few finishing touches to the nest and then went to work in earnest and raised a brood of three. It was interesting to watch the young birds being fed, as the window from which I took the photograph, was only about ten feet from the nest.

Last spring and part of the summer I kept a little record of the nesting birds on our place (about six acres). I find from this record that the following birds were reared: Four broods of Robins, 13 young; two broods of Wrens, 8 young; two broods of Wood Thrushes, 4 young; one brood of Red-eyed Vireos, 2 young; one brood of Brown Thrushes, 2 young. Two broods of Bluebirds were raised in a bird-house put up by one of our neighbors.

During the year, my brother and I identified over forty species of birds in this vicinity. This winter we are feeding the birds and also trying to tame the grey squirrels in the hope that they will drive away the red squirrels. We have built and erected ten bird-houses, three of which have been occupied.—RAYMOND SYNNESTVEDT, *Bryn Athyn, Penna.*

The Deserted Home

Over the front of the low farm house, climbing with the aid of a trellis above



AN UNUSUALLY-PLACED ROBIN NEST

the eaves, ran a fine, old, trumpet honeysuckle. It had a stem as thick as its owner's wrist and was the pride of her heart when covered with its load of golden-hearted, scarlet blossoms. One day in early spring, when she had taken the curtains down from the south window, under the honeysuckle, two Sparrows began to build their nest in the fork of two branches.

All went well with them until the curtains were put back into the window, then trouble began. The shade was dark green and plainly reflected the two birds in the window. Mr. Sparrow, thinking that his reflection was an intruder in his peaceful home, flung himself against the glass and beat with all his might. Finally, when tired out he flew to a neighboring tree where Mrs. Sparrow was perched. "Jack," she said, "let that Sparrow alone until he touches you and help me build the nest!" "No," he cried, "what is the good of building a nest and then being driven away. You remember last year we had just finished our nest, and you had laid the eggs, when our English cousin threw them out of the nest and made it into a home for himself. Then, of course, we had to make a new one," and stirred up by the thoughts of his wrongs, he flew to attack the reflection in spite of the protests of his wife.

Needless to say he made no impression upon his antagonist. After beating against the glass until he was tired out, he again returned to Mrs. Sparrow, to rest. At intervals he kept up the unequal contest all day. He at length said to his wife "It isn't any use, I can't drive him away, and I won't work on a nest to be driven away after all that trouble. But down in the lower corner of the orchard there is a little apple tree where we could build a nest in safety." "Oh dear," said Mrs. Sparrow, "I hate to leave this lovely honeysuckle, but I suppose I must."

So down in the orchard they built a new nest and sang their sweet songs undisturbed, while the honeysuckle, whose branches would have sheltered them so lovingly, sighed as the wind whispered to

it, "Why can't people let well enough alone?"—DORA WORSTER LEWIS, *Bangor, Maine*.

Broad-winged Hawk in the Christmas Census—A Correction

Unlike its relatives the Red-tailed and Red-shouldered Hawks, the Broad-winged Hawk is a highly migratory bird which winters south to Venezuela and Peru. Its status in the United States in winter is somewhat uncertain, owing to the ease with which small individuals of the larger species may be confused with it. We noted, therefore, not without a certain satisfaction, that a record for this species at Haverford, Pa., in the census just published, was based on a bird 'found dead.' However, a wing of this bird courteously forwarded to the writer, and received after the census had gone to press, proved that it had been wrongly identified.—J. T. NICHOLS, *New York City*.

Young Barn Swallows Returning to the Nest

During our stay at the shore this summer, we were much interested in a family of Barn Swallows that were nesting under the eaves of the piazza. We were surprised to notice that, after the young left the nest, *they all returned to it at night*. As many as could, would get into the nest, while the others would cuddle up as close to it as they could. They seemed to regard the nest as their permanent home. This they did for four nights. As we left then, I don't know how much longer they kept it up.—(Miss) A. C. TUCKER, *Mattapan, Mass.*

Notes on Grackles and Other Birds

A few days ago, in the western part of New Jersey not far from Camden, Grackles visited a garden, and tearing the pods open, ate the peas. Not having heard of their doing this before, I made some inquiries and found that they did the same thing in the eastern part of New Jersey last year

with some peas that were left on the vines for seed, and that another garden always had mosquito netting over the pea vines, as otherwise the peas were all eaten up by them. I have frequently known of their eating Robin's eggs and once saw them attack a young Robin which was just out of the nest and could scarcely fly. On the other hand, Blackbirds undoubtedly eat great quantities of insects and some weed seeds. I have seen them following a plow about ten feet behind the driver and eating all the worms, grubs and insects that were turned up.

On quite a number of occasions I have seen Crows take young Robins from the nest and, as a rule, they killed all the young Robins in the nest before they flew off with one. When engaged in such work they are very furtive and silent and they will take the early hours of the morning, before people are about, to search for nests near houses.

One Fourth of July some children were sitting on the front steps of a porch industriously throwing fire-crackers onto the walk in front of them and at times setting off whole packs. At one end of the steps within reach of one of the children was a Chipping Sparrow's nest in a white hydrangea bush. During the whole performance the old Chipping Sparrows kept feeding their young quite as unconcernedly as if nothing were going on. Once when a pack of fire-crackers was exploding, one of the old Chipping Sparrows brought a small worm to the nest, flying about four feet over the pack.

In shooting on places where there were many birds I have found that Robins, Wood Thrushes, Song and Chipping Sparrows very soon learned that I was not after them and paid no particular attention to the noise of the gun. As far as my observation goes, shooting around a place or the setting off of fire-works has no tendency to drive away the birds not shot at or pursued.

In one case a man tried to break up a Grackle roost in the fall by firing a gun under the roost where hundreds of Blackbirds had assembled. Not succeeding, he

took to shooting the birds themselves. This did not prevent their returning **night** after night as they had been in the **habit** of doing for years. I understand he **shot** thirty or forty birds. The next year, however, the roost was abandoned. In walking under one of these roosts at night I have clapped my hands suddenly and startled the Blackbirds and Robins out of the trees. After doing this two or three times, the Robins would pay no attention to the noise but the Blackbirds would always fly off.—F. R. WELSH, *Philadelphia, Penna.*

The Ruby-crowned Kinglet

He was long an unsolved puzzle. He had a large family and they seemed to prefer the garret rooms of the tree houses. One could not be sure how much of his want of size was due to his remoteness.

It is a question whether the time and energy consumed in the miles of chase the acquaintance of most birds costs the amateur find their value received. In the momentary delight that follows sure identification? Sensation as a compensation has its value, and the keenest is sometimes the fleetest. There is a royal road to bird-lore. It is traveled alone, on foot and without a glass. It was along this highway the Kinglet met me several times and at intervals of miles and months, to be truthful, before that supreme moment of identification. From the tree-tops they looked like a company of goldfinches in their winter uniform. One day they marched to a new tree pasture without the hop-skip-and-jumpy flight of the Goldfinch. At that moment a new interest was born.

Near the close of the fourth migration, which brings us to the springtime of the next year but one, a long tramp brought me to a gooseberry patch just at nightfall. The dainty green leaves were half grown and probably teeming with small life, for half a hundred pale olive birds, two-thirds the size of a corpulent Wren, were busy getting supper. Who were they? Ah! my friends of the tree-tops. Yes, but who? Wing-coverts alternate white and black, making a thread stripe herringbone at the

base of the tail. Big brilliant eyes, set in a circle of white, too big by far for the tiny head. Long legs, like the stems of maiden-hair, complete the gnome effect.

When he went from bush to bush, he flew straight up, hovered as though taking his bearings, then swooped to the mark like a Kingfisher to his prey. One confiding little chap lights within arm's length. Now I'll have him. His business is so engrossing he forgets to be afraid, if he ever knew how. And why should such a little fellow be afraid—who would harm so small a thing as he? Come to think of it, barring the Hummer, he is the smallest grown-up bird I have ever seen. I wonder—? Obliging he dips his head, the wind raises a feather or two from its top, and lo, there is the trade-mark. Just a brushful of brilliant red, safely hid from the commonplace crowd as my lady would carry her most valued jewel—a Ruby-crowned Kinglet. Kinglet! Why, did you think he was a bigger bird? You'll go to the foot in the word-analysis class shortly.

After a couple of years of acquaintance, during which I considered myself lucky if after a couple of hours' patient watching he showed his beauty spot, one day fortune smiled. A company of friends were watching his antics in mating time. He and his pretty sweetheart were playing in some low shrubbery by the river's edge, when, of a sudden, there grew from the top of his head the most beautiful filigree crown of blood-red frost. The delight and wonder of it! For minutes the slender sticks held aloft the brilliant crest. Then feather by feather it melted till every hint of the transfiguration was gone. He was again the commonplace gnome it must have puzzled his bride to distinguish from his brothers.

He is a globe-trotter and visits Iowa twice a year, in April or May and again in September. He commonly stays a couple of weeks at each visit, but he is weather-wise and comes and goes when the climate prompts him.

His feeding-call is noisy for his size, but his song, which he gave me the day we played Peeping Tom at his declaration of

love, is a real warble—a series of sweet notes and trills in a tone of voice that suits his size and daintiness. He has a double cousin who is a little grayer of olive and who takes his name from his crown of orange. This crown is framed in black and is always on exhibition.

The Kinglets are clannish and the two families consort always, though the Orange-crowned is apparently the hardier as well as a trifle the larger, as he comes ahead of his more brilliantly decorated cousin.—THERESE JUDD, *East San Diego, Calif.*

An Albino Wood Thrush

During the several years that I have been interested in bird-life it has been my constant expectation and desire to discover an Albino, having never seen one except in photographs. Until July, 1916, my hopes had not materialized. On July 28 I started out to visit the bird-haunts and met some workmen soon after starting, who, knowing of my interest in birds, called to me and inquired, "What kind of a bird is it that is entirely white, has pink eyes, and is nearly as large as a Robin, but has a shorter tail?" Only those with a keen love for new things in bird-lore can know the real thrill of pleasure that went through me at that moment. The very thing that had been sought for so long a time was now, it seemed, within reach, as the location in which this strange white bird had been seen several times recently was only a short distance from my home.

But, alas, I had heard of the freak too late, since several long waits and faithful searchings failed to reveal our white friend. It had been seen in a low woodland near a small stream in company with "other birds of the same size, of a brown color above with round brown spots on a light-colored breast." This description, of course, gave a positive clue to the identity of our strange bird, as I knew it could be none other than the Wood Thrush; but my chief desire was as far from being satisfied as before, though I must confess that the pleasure I had in searching for the bird with the hope and expectation of discovering it at any time,

fully repaid me for the search. My hopes were yet to be realized. A neighbor reported on August 20 that a white bird had been seen in his garden in company with Robins. It had been several days since it had been seen; however, if it reappeared I would be called on the 'phone at once to see it. On September 1, just about sunset, I received the 'phone call with the assurance that I might view the 'White Robin' if I wished to do so. Of course I lost no time in reaching the spot, and, on arriving, found a perfectly white Wood Thrush retired for the night in the dense foliage of a small cherry tree. A positive identification could not be made from this view, as only the head and one-half of the body could be seen; so the tree was slightly jarred to make the bird move. He flew to a nearby tree and gave his *whit-whit*, ending in the familiar rolling call-note, thus giving a positive identification. Have there been previous reports of an Albino of this species? I do not recall having seen one.—G. G. REEVES, *Winston-Salem, N. C.*

Night Voices

Mysterious night! Nor have I ever been alone in the opinion. I shall never forget the strange spell under which I fell when I first heard the geese passing over me in the cool, quiet night. I could not see them, yet I knew they were there, and there was a wonderful strangeness about it all that has never left me.

Since then I have tried to forget, at least partly, the mystery of those voices, and tried to look at them in a matter-of-fact way. Of course, the geese were migrating, they were flying both day and night that they might arrive at their destination as soon as possible. There was not nearly so much mystery about it after all.

And then I met other deep night voices, these too, mysterious. Screech Owls were common—I knew their small size, and had seen them often, so there was not much mystery about them, but oh! when I heard my first Barred Owl and then my first Great-horned Owl, I was again under that

strange spell, this time not simply because it was vague, but because it was terrible! I knew that these birds were no toys, they were not far up, out of reach, and sailing away as fast as their wings could take them, but here they were on my earth, in my kingdom, and, worse still, I was in theirs. I felt rather small! Then, bravely, I thought how much larger I was than a field mouse or even a Bob-white, and knew there was nothing to fear, when all at once the hollow hoot would sound two or three blocks nearer and I would feel almost out of place. That is, I felt that there were places better suited to me.

The feeling of fear has long left, but the wonder remains. I have never regretted a night spent in the woods. To my surprise I have found that there are hosts of night voices, not strange wild wood-tyrants, but ordinary day voices echoed at night.

Thus there seem to be the three classes of night voices: the migrating ones, which call to one another as they journey along, the hunting ones, that make the woods shiver, and, finally the truly mysterious ones—our own little day singers—about whom it would seem there should be the least mystery, and yet for me about whom hangs the greatest.

The first of these that I heard was the famous Mocker. When I landed in Texas, I was soon told to listen for the night Mocker. I listened, of course, and strangely, perhaps, it did not seem very wonderful that he should be singing. He was a Mockingbird, and Mockingbirds sing that way, so why should I wonder? But after two weeks I found myself seeking a reason. I determined to find why, if I could, he should spend his sleeping hours working like that. The first step I took in my study was to spend the night with the Mockers.

He had sung all day, and I thought he would have been tired. I thought that he had done enough jumping up in the air and tumbling down on singing wings, to last for at least one day, so I was not surprised when I saw him start off on a flight across the prairies to his

roosting place in a grape-vine thicket. I waited until it grew dark, yet did not want to frighten the fellow from his thicket. I supposed, truly, that he was not going to sing that night. And then the moon came up and found me waiting for the Mocker. I did not have to wait more than two hours longer surely, though I did not look at the clock, until back came the Mocker. Now here was some of the mystery: Why should he come back to this particular telephone pole, or this particular chimney to do his singing, when his roost was a quarter of a mile away? If it was to entertain his mate who was likely asleep on her nest, why should he not sing nearer to her, for she was at least three blocks away? And then, why should he sing at all?

It was entertaining to hear and watch him at any rate, whether there was mystery or not. He was surely not asleep, as some have thought, for I could see his little form shoot up into the air and come back to the pole just as nimbly and unerringly as in the day, and his voice was just as clear, if not clearer, and his program just as wonderful and varied as it had been in the day. He sang here on the telephone pole for a long period and then flew to the chimney. Finally, I felt that I knew why he came here. If he should have been attacked by enemies, who could see better than he at night? He would not have had much chance for escape in the thicket, but from the chimney he had wide sweeps of prairie on all sides at his command, and this probably gave him a feeling of safety. Probably the desire for this feeling determined the place where he was to sing, whether it was near his mate or not. Therefore I felt that I had solved my problem so far.

But why should he sing at all? and then a new thing happened. I heard another song—not that of an Owl, a Night-hawk, or a Whip-poor-will—but of a common Lark Sparrow. Another singer for the night? I went to find him, and there he was on a telephone wire, about a block from where I had been. This was a genuine surprise, and made things fairly

hot with interest. He was not asleep either, for he stopped singing when I came too near, and finally flew away.

So the Mockers were not alone. Later I found there were many other night singers. A pet Dickcissel I had in a large cage regularly sang on the bright nights, and he was answered from the fields. A Slate-colored Junco, in the same cage, sang too, but the Mockers and the Lark Sparrows were by far the most common.

The most singing was done on the brightest nights to be sure—and I would have thought that the birds mistook the moon for the sun had they never sung in the same way, at the same time and place, when there was absolutely no moon, or the light so dim that I could not see the birds there. I do not believe the moon fools the birds after all.

Since then I have come to West Virginia, and have further studied the night singers, and have had good opportunity as I sleep out-of-doors.

The Yellow-breasted Chat is the most common night voice. Like the Mocker his program is just as varied as by day, though strangely the Chat does not seem to select a particularly open place as the Mocker did. Then, too, I frequently hear the Yellow-billed Cuckoo, and Wood Pewee. Some of the individual birds which I have heard sing at night, I feel sure, were just temporarily startled by a sudden wind, a loud noise, or some other disturbance unknown to me. But just why should any of them sing, instead of spreading alarm, or some such thing?

First, I believe that the nesting season—and this is the one during which they most frequently sing—is a nervous time. The fact that the cares of a family and not an individual only are upon them, may cause this partly, and possibly also the fact that their whole system at the breeding season is in higher tension.

If this be so, and I think it is, much slighter noises than usual would awaken the sleeping bird. Thus a slight breeze in the grape-vine thicket may have awakened the Mocker, and a mouse in the raspberry vines may have aroused the Chat. Once

the bird is awake, and especially if it is light, the means of getting back to sleep are probably few, and the bird sings rather than do nothing at all. It may be that singing becomes a habit with a few individuals, but I believe that it is rarely so. I can see no reason why a bird should waken himself to sing, or why he should waken his mate just to have her listen, when both of them are likely more in need of sleep than at any other season of the year. I feel quite sure of myself in saying this, for frequently on nights before storms when there was absolutely no wind blowing, the Mocker would not be at his singing post. It is not the policy of a good, healthy normal bird to be idle if he is awake. If there ever was a busy creature it is certainly a bird. Night is no time for a day bird to find anything to eat—perhaps he would if he could; then there is no family to feed, no bath to take, so why should he not sing so long as he is awake? That is the way I like to look at it.

Whether this explanation is satisfactory or not the Chats will go on making the nights lively with their strange noises, and the Mockers singing their accompaniments to the Texas moon. It is mysterious still!—GEORGE MIKSCH SUTTON, *Bethany, W. Va.*

Pied-billed Grebe Caring for Its Young

The article in July-August, 1914 number of BIRD-LORE, 'At Home with the Hell Diver,' was of particular interest to me, recalling as it did the experience of a friend, Mr. Ward Lounsbury, of 520 Axtell St., Kalamazoo, a man of observant habits and unquestioned probity. As told to me, the incident was as follows:

Early in the summer, four or five years ago, Mr. Lounsbury was spending the day fishing at Atwater's Pond, a few miles southwest of this city. Two Pied-billed Grebes, each accompanied by two young about the size of a week-old chick, were swimming about not far away. After watching them for some time from his boat he determined to try to catch at least one of the young, and moved up toward

them. However, he could not come close enough to reach them as the mothers would take the young upon their backs and so make better speed. Moreover, when too closely pursued or perhaps fatigued, they would push the young from their backs, and evidently giving them a signal which was understood, each baby took a portion of the mother's tail in its bill, and all disappeared under the water, coming up some distance away with the babies still clinging to mother's tail. This was done repeatedly by both groups of birds, until after spending about two hours in the pursuit Mr. Lounsbury gave up the chase, thinking they had earned their freedom.

Mr. Burroughs tells of the Lóon taking its young upon its back and swimming away with them, but I have nowhere read of an instance like the above.—GRACE H. PECK, *Kalamazoo, Mich.*

Bird-nesting in Texas

Early Sunday morning, June 3, 1917, Norman Pecore and the writer started out on a bird-trip which we had been looking forward to for several months. With our field-glasses slung over our shoulders and sufficient provisions to carry us through a long strenuous day, we boarded the inter-urban for South Houston, a little settlement on the prairie a few miles southeast of this city.

Arriving at the little station, we turned our faces in the direction of a small pear orchard out in the open prairie which was our destination and started off on a bee-line for it. Several times we flushed sputtering Meadowlarks from almost under our feet, but a most careful search for nests availed us nothing. Every few feet the dry prairie grass was adorned with wild flowers of different kinds, which caused us to stop and comment on its beauty or perhaps remove their thorns from our clothing and persons. Then we ran across a large colony of fat, sluggish-looking young bugs in different stages of development. These were black with orange-red trimmings, and wingless. A few in the last

stage of development were colored with a mixture of yellow, green, and black, had wings and long, spiny legs, from which we came to the conclusion that they were a species of locust.

When within a short distance of our destination, we disturbed a flock of Buzzards at their sickening feast, and one of them flew in the direction of the clump of trees. As he was passing, a Scissor-tailed Flycatcher darted out from the foliage and attacked him with a vengeance. The *melée* ended with the Buzzard fleeing with precipitate haste, and the victorious Scissor-tail flew back to receive the plaudits of his mate. No wonder he was so vigilant and brave, for we found his nest out on a horizontal branch of a gum tree, about six feet from the ground. In the nest were four prettily tinted eggs, speckled with brown.

In the next tree to this, and high in the topmost branches, we found a Kingbird's nest, and the two anxious owners watched us while we looked in upon their four treasures. Before we could climb into the next tree, a Dove dropped from the lowest branch and trailed along the ground. Her going left uncovered one egg and one tiny, helpless nestling, which apparently had just hatched. We found several more Doves' nests with eggs, and one unfinished nest of the Orchard Oriole, besides three empty Grackles' nests. After looking into all the nests, we wiped the sweat from our faces and arms, and sat down under a shady tree to eat our lunch, leaving plenty of crumbs for any of our feathered friends that might care to eat them.

We then moved on to a small clump of trees about half a mile beyond the first one. On the way we passed a small, dried-up pond and startled a pair of Killdeer, but couldn't find their nest, although we did discover a few unoccupied Redwing nests.

As we drew near our second stopping

place, a crowd of chattering and scolding Grackles hovered over us and their noise was almost deafening. The first nest we investigated here was a huge structure almost too big for the small pear tree which held it, and while we were getting in position to look into it two half-grown Grackles flopped out. After much exertion, we finally captured them and put them back into the nest, while the flock over our heads raised Cain. In the next tree were two Grackles' nests and two Doves' nests; and in the next, two Doves' nests and an Orchard Oriole's nest with five eggs, four which rightfully belonged there and one deposited there by the shiftless Cowbird. Every tree in this grove contained at least two nests, and some contained as many as five. The nests were those of the Dove, Orchard Oriole, Kingbird, Mockingbird, and Grackle. A china-berry tree, a little apart from the pear trees, held two Grackles' nests and a nest full of young Orchard Orioles. Nearby we found a Dove's nest upon the ground and it contained, as did nearly all the others, two glossy white eggs.

The sun was beginning to sink in the west when we started upon our homeward journey. As we sat in the comfortable inter-urban car homeward bound, we examined our record for the day and found that we had discovered the following nests, and probably had overlooked some in our excitement: 2 Kingbird, 29 Grackle, 12 Dove, 6 Orchard Oriole, 4 Mockingbird, 1 Scissor-tailed Flycatcher, 3 Redwing Blackbird, unoccupied.

I am unable to account for the large number of nests in these few trees, unless it was due to the fact that there are no other trees to be seen for several miles in any direction. Altogether, we considered the trip a wonderful success, and are looking forward to another one next summer.

—J. M. HEISER, JR., *Houston, Texas.*

THE SEASON

XII. December 15, 1918, to February 15, 1919

BOSTON REGION.—Mid-February brings the low ebb of the year, with a brief period of dearth before the awakening of early spring. These first two months of winter have been of extraordinary mildness for eastern New England. December and January had many cloudy days but no great cold nor severe storms. The few storms that did pass, nearly all brought rain instead of snow and there were many successive days of sun and mild weather. Sap has dripped at intervals all winter from broken twigs of the sugar maples. Thus a season of most unusual mildness succeeds, in striking contrast, the very exceptional cold of the previous winter.

The chief interest has centered in the winter visitors. A few reports of Evening Grosbeaks have come in from towns north and west of Boston, particularly from Essex County. Apparently most of the flocks have not been much in excess of twenty-five birds. A few Pine Grosbeaks have been about nearly all winter in the outlying towns, but apparently not in large numbers. Great Northern Shrikes came in the early winter and still remain. Two Red Crossbills appeared in the Harvard Observatory grounds on January 28, sampled the Norway spruce cones, and departed with characteristic notes. But few others have been reported this winter, so that there has not been a marked visitation. Other than these, there have been but few northern winter birds inland.

Of the usual winter residents, there has been somewhat of a scarcity despite the open and apparently attractive winter. The New England landscape would seem strange indeed without Crows and numbers have wintered near the coast, yet seemingly not in the abundance of some winters. The unusual abundance of Hairy Woodpeckers was mentioned in the fall report. These and Downy Woodpeckers remained in force through January, but seem to have slowly filtered away, particularly

the Hairies, during early February. They had been conspicuous in Cambridge during December and January, frequenting the old trees and announcing their presence by their vigorous actions and voices. No doubt many were visitors from somewhat farther north, for such winter birds are often larger than the resident form, approaching the northern *leucamelas*. Tree Sparrows and even wintering Song Sparrows have seemed few, and Juncos apparently have been little in evidence about Boston. Purple Finches are reported wintering to the south of Boston, as at Sharon, where many make daily visits to a friend's feeding-shelf.

Most noticeable has been the almost total absence of Golden-crowned Kinglets and Brown Creepers. These hardy little birds commonly enter the towns, usually accompanying the little flocks of Black-capped Chickadees on their regular beats through the village trees. But this winter the Chickadees have come and gone on their rounds alone. A solitary Kinglet appeared in Cambridge on January 14, but no others were observed in the course of several walks. And this has been the experience of others. No doubt the preceding bitter winter brought unusual mortality among them.

A pleasing local feature has been the great congregations of Herring Gulls on the Back Bay Basin in Boston. Owing to the mildness of the season, this has been open most of the winter or at times partly frozen over. On bright forenoons upwards of 1,000 or more birds have gathered here to rest and bathe, sitting in close order on the water, or standing at the edge of the ice. Among them have been a few Black-backed Gulls in the proportion of about one to a hundred of the Herring Gulls.—GLOVER M. ALLEN, *Boston, Mass.*

NEW YORK REGION.—This period was remarkably free from winter gales, extreme cold, or snow. The accompanying con-

ditions of bird-life during the first month (when insects, as aphides etc., were still in evidence) are more adequately portrayed by Christmas Census reports in BIRD-LORE's last issue, than space permits here. The outstanding feature, correlated with weather, was the scattered reports of summer or fall birds of abnormal occurrence in winter. Such are Vesper Sparrow at Van Cortlandt Park, December 29, Killdeer, Red-winged Blackbird, Cowbird, Towhee and Chipping Sparrow in the Bronx, January 3, (reported to the Linnæan Society by E. G. Nichols); a female Towhee at Hempstead, Long Island, December 28 (Theodore Roegner); a Nashville Warbler in the northern outskirts of the city up to January 9 (S. H. Chubb and W. DeWitt Miller). Report reached us that a Yellow-bellied Sapsucker was wintering in the Bronx, and that a Brown Thrasher had been seen there in February, but the last month was in the main featureless. Stragglers from the flight of Pine Grosbeaks which earlier swept across New England, penetrated our region to the northwest.

Throughout the winter there was a dearth of water-fowl at the shore. It can not be said that none of the northern species were present, as a Glaucous Gull was observed off the Battery, February 10 (Ludlow Griscom). The Golden-crowned Kinglet was unusually scarce. Locally, at least, there was a scarcity of certain other land-birds which in most winters are present in moderate though reduced numbers. On west-central Long Island where the writer resides, the Meadowlark is such a species. Ordinarily the Meadowlark is here a rather common winter bird, but this year they disappeared abruptly at the close of the fall migration. The same thing is true of the Myrtle Warbler further east at Mastic on the south shore. The most ready explanation is to be found in the very severe weather of the *preceding* winter during the close of which these two species had become rare and absent respectively in the localities stated. The individual birds which perished (of course) or were driven out

last year did not attempt to winter this year.

This year the last autumn and first spring song of the Song Sparrow both fall in this period. December 15, at Garden City, Long Island, a moist, unseasonably warm day, one was singing repeatedly full song, and Mr. W. DeW. Miller reports one in full song at Plainfield, N. J., February 2.—J. T. NICHOLS, *New York City*.

PHILADELPHIA REGION.—A sharp contrast to last winter's bitter cold and heavy snowfall is the present winter's mild weather and warm rains. The temperature for December averaged five degrees above normal, and that of January, six degrees. As for snow, there has, up to the present, February 10, practically been none; a few flurries and about two inches February 7, which quickly melted, gives a very good idea of the total amount fallen. Extracts from the writer's notes taken January 1, when the temperature reached sixty-two degrees, read as follows: "In more protected swamps skunk cabbage shows perceptible growth, elder shows new sprouts. Faint notes of the little Hyla heard today." These notes show to some extent the unusual mildness of the winter. The weather, of course, has had more or less effect on the winter bird-life and a number of species that are normally almost, if not quite, entirely absent, are present in variable numbers. A flock of eleven Killdeer, December 25, Black-crowned Night Heron, December 28, Kingfisher, January 1, Ruby-crowned Kinglet, January 5, all at Camden, N. J., and a Myrtle Warbler at Sewell, N. J., January 26, point to abnormal weather conditions and all of these birds at least could hardly be found during an average winter hereabouts.

By late January some of the early spring migrants had already put in an appearance, two weeks to a month before the average date of arrival; Camden, N. J., January 26, Bluebirds, Red-winged Blackbirds, and Rusty Blackbirds; February 9, several flocks of Robins.

At Cape May, N. J., January 19, a flock of about fifty Snow Buntings were observed, and on the same day a Brown Thrasher, a rather unusual mixture of the breezy North and the sunny South.—
JULIAN K. POTTER, *Camden, N. J.*

WASHINGTON REGION.—The bird-life of the region about Washington during December, 1918, and January, 1919, was decidedly less interesting than usual. The great numbers of Ducks that were such a conspicuous and attractive feature last winter were largely absent, at least from the immediate vicinity of the city, either disturbed by the continuous operations of numerous aëroplanes and hydroplanes along the river, or induced by the mild winter weather to remain at more northern or more coastwise localities. Farther down the river, at Mt. Vernon and below, however, the Ducks have been present in larger numbers. Nor have most of the regularly common winter residents been more than ordinarily in evidence, as either species or individuals, in spite of the open winter.

Robins, however, have been seen more frequently than is usually the case during the winter, and a single Song Sparrow was heard singing in the city on January 14. Six species of Hawks—Sparrow, Sharp-shinned, Marsh, Broad-winged, Red-shouldered, and Red-tailed—have been fairly common, particularly in the valley of the Potomac River. The Red-breasted Nuthatch, the practically total absence of which was so noticeable last winter, has returned in its normal numbers; but almost none of the rarer winter visitors from the North have been seen. An American Pipit was noted on December 15, 1918, by Mr. L. D. Miner, which is of interest because it is the only definite local record between November 30 and February 16. The Myrtle Warbler, which is usually but a rare winter resident, has been tolerably common this season. The Pileated Woodpecker, one of our rarest birds, was seen by Dr. A. K. Fisher at Plummer's Island, Maryland, on December 8, 1918.

Two of the most important ornitho-

logical occurrences of this winter have already been recorded by Messrs. W. L. McAtee, Alexander Wetmore, and Edward A. Preble, in their Christmas bird census in the last number of BIRD-LORE, but to which it may be worth while to call further attention. On December 23, they found a dead Long-eared Owl near Mt. Vernon, Va., a species not now often met with here. They also saw two Common Terns along the river near Mt. Vernon, which observation represents the first winter record of this species for the vicinity of the District of Columbia.—
HARRY C. OBERHOLSER, *Biological Survey, Washington, D. C.*

OBERLIN REGION.—Such an open winter has not been known here for sixteen years. At no time has the ground been covered with snow for longer than three days at a time, and even then at a depth of less than three inches. Under such conditions it would naturally be expected that bird-life would be so affected that more birds than usual would be found in the region. But quite the opposite has been the case. Not only have the regularly resident birds been less numerous than usual, but the regular winter visitant species have also been represented by fewer individuals than usual, and no unusual winter birds have been noted.

During the warm days of early February the three Robins which remained were singing, the Cardinals and Song Sparrows joined the chorus in the mornings, and beyond the borders of town the Meadowlarks sang during the mornings. Chickadees, Tufted Titmice, and Downy Woodpeckers, began their courting, and even the Northern Flickers began to show symptoms.

Flocks of Geese were reported as having been heard passing northward on February 11 and 12, but it is possible that the calls were those of a flock of domestic Geese southwest of town. At any rate the writer has neither seen nor heard migrating Geese since last November.

From the standpoint of an ornithologist the winter has been the most disappointing

one in more than a decade. The disappointment has probably been accentuated by the natural feeling that so warm a winter season ought to be appreciated by the birds as well as by man. It seems to me more than possible that the extreme cold of the previous winter may be the cause of the scarcity of the birds this winter.—LYNDS JONES, *Oberlin, Ohio*.

MINNEAPOLIS REGION.—Viewed as a whole, the present winter has been a phenomenally mild one in all this region. Thus far there have been only two short spells of cold weather, the first in early January and the second in early February, when for a few days really severe sub-zero weather (twenty-three degrees below at Minneapolis January 3), prevailed, and the gorge of the unfrozen Mississippi below this city was filled with rising vapor. The largest lakes hereabouts did not freeze over until Christmas time, and the ice has been thin all winter. January was the third mildest month in the history of the signal service here and the only time when the month has closed with no snow on the ground. There have been numerous days warm and pleasant like spring, interspersed with days of fog and rain instead of snow. In the northern part of the state there has been considerable snow since late fall, but the marshes are scarcely frozen and Lake Superior has been free from ice all winter, an almost unheard-of thing.

After the great scarcity of birds last winter, it has been a special pleasure to bird-lovers to find a goodly number and variety present this season. Pine Grosbeaks, Evening Grosbeaks, and Bohemian Waxwings have been here since December, but not commonly. Flocks of Redpolls have been about all winter. The mild weather has induced many Tree Sparrows, Juncos, a few Purple Finches, Brown Creepers and Red-breasted Nuthatches to remain with us in sheltered places. One of my students, Mr. Burton Thayer, reports large flocks of Red-winged Blackbirds wintering along the Minnesota River, a few miles south of the city, and

since February 1, he has seen several Horned Larks and one Great Northern Shrike. A few Crows have been about all winter and someone reported flushing a Wilson's Snipe from a spring-hole about February 1. Two Cardinal Grosbeaks have been reported to the writer this winter—one at the summer home of Mr. Russell M. Bennett, at Lake Minnetonka near this city, and the other at Faribault, Rice County, reported by Mrs. Guy C. Menefee as coming to her feeding station. The Christmas censuses in the last number of BIRD-LORE contain reports from St. Peter and Hutchinson by Mr. H. J. LaDue and Messrs. Avery and Eheim respectively, which contain the following southern birds in addition to the above wintering in Minnesota this season: Mourning Dove, Fox Sparrow, and Mallard Duck. The Fox Sparrow is an addition to the list of Minnesota winter birds.

Again the Snow Bunting and Lapland Longspur have been entirely absent hereabouts. What has become of these birds, formerly so abundant?—THOS. S. ROBERTS, M.D., *University of Minnesota, Minneapolis Minn.*

KANSAS CITY REGION.—It is difficult to understand why birds will accept decidedly unfavorable winter conditions in a given region, remaining to starve and freeze throughout an unusually severe season, and will fail to take advantage of entirely favorable conditions in the same territory during other winters. Thus, during the record-breaking winter of 1917-1918 when the Missouri River was locked by ice from its mouth to its source, an extensive tract of bottomland in particular, newly formed by the river's meandering, was the winter home of great numbers of Sparrows of several species, as well as untold thousands of Red-winged Blackbirds, of three subspecies. Yet the present winter, mild and open in comparison, sees this same bottom region nearly deserted. The weed patches have greatly increased in number and extent; the thickets and tangles afford better shelter; the upland

feeding stations remain unchanged; but the flocks of birds left shortly after Christmas with the coming of the first real severe weather.

This is the first winter in the writer's memory that no Harris' Sparrows have remained through January and early February, and in fact they seem not to have passed through in anything like their usual abundance. Tree Sparrows have been unaccountably scarce. The White-crowns seem to have all passed on farther south, and the usual throngs of Red-wings are entirely missing. Song Sparrows, however, are present in some numbers.

The first restless Robins appeared on January 19, and on the 26th several small flocks, together with a few Blue-birds were seen. Of twenty-one species noted on this date, a Yellow-bellied Sapsucker and a Kingfisher were the most unusual.

Among the rarer wintering species may be mentioned a troop of Purple Finches and a flock of a few dozen Cedar Waxwings that have remained in the shelter of Forest Hill Cemetery, and a flock of about thirty Mergansers that have been using a quiet side-channel of the Missouri River some three miles above the mouth of Big Blue. The Waxwings have been feeding largely on an abundant crop of hackberries. The Ducks probably came down with the Christmas storm as they have been under observation since late in December. They are unquestionably in pairs.

A few Mallards and Pintails began to feel the call of their northern homes during the unseasonably balmy days of late January and early February. The appearance of these early migrants coincident with false press notices relative to the unconstitutionality of the federal law called into being more than the usual spring activity among local shooters. Their organization is dying hard, and it is fervently hoped that their long-sought

court-test is at hand.—HARRY HARRIS, *Kansas City, Mo.*

DENVER REGION.—In so far as the writer's experiences and opportunities go, the two months now in review have seemed ornithologically colorless. While there has been a welcome abundance of Meadow-larks, many unusually exuberant with song, and also of Red-wings, Bluebirds, various species of Juncos and of Tree Sparrows, many other species, frequently and even regularly seen here during January and February, have been nearly or quite absent. Thus the writer has seen no more Great Northern Butcher-birds, only one American Rough-legged Hawk and but four Marsh Hawks. The Robin was seen in Cheeseman Park on December 29 and 30. The new year opened auspiciously in many ways, not least of which was the sight of a Richardson's Merlin just out of the east edge of Denver. It is probable that a few Bohemian Waxwings have been lingering about the hospital region all winter, for several small flocks of birds have been seen resembling this species, but at too great a distance to be positively identified; flight, size and flapping characters, however, all pointed to the correctness of this diagnosis. This question of diagnosis and of the occurrence of unusual species and of possibility of unique experiences are (and have been for years) a source of keen interest to the writer, making for an undying interest in bird-work. For example, it has been rather a unique experience to observe in the immediate neighborhood of the commanding officer's house at General Hospital No. 21, three species of Owls; twice the Great Horned Owl, twice the Screech Owl, and on several occasions a number (perhaps a family) of Long-eared Owls, while the reservation at the same time boasts, in the late fall and early spring, the presence of the Burrowing Owl.—W. H. BERGTOLD, *Denver, Colo.*

Book News and Reviews

TREES, STARS, AND BIRDS. A Book of Outdoor Science. By EDWIN LINCOLN MOSELEY, A. M. World Book Company. Yonkers-on-Hudson, N. Y., 1919. 8vo. 396 pp., 244 text-figures; in the back 16 colored plates of 58 species of birds.

We expect that this little volume will fill a distinct need as a text-book of nature study in the schools, for which it has evidently been planned with care. Trees, Stars, and Birds are perhaps the three classes of natural objects about us most consistently through life, and some knowledge of them cannot fail to broaden the viewpoint and be a source of constant pleasure. The last third of the book, devoted to birds, we will speak of more in detail.

The treatment begins with the higher kinds of birds—Bluebird, Robin, etc., and ends with the lower, as the water-birds, of which there is scant mention, thus reversing the conventional order. This is probably wise, as it brings the more familiar species to the attention first. It is to be regretted that nothing at all is said of some important lower orders; for instance, the diving birds: the Loon, a representative of that group is familiar to so large a proportion of outdoor people. The structure of birds, their place in nature, value to man, methods of attracting and encouraging them, the more notable of their habits—as migration—are skillfully introduced and clearly described. The subject matter is throughout well chosen and authoritative, in keeping with the colored plates by Louis Agassiz Fuertes, mostly from a publication of the United States Department of Agriculture. The text-figures have much merit; a number of these are excellent photographs of specimens in the American Museum of Natural History, and many photographs of living birds in the West by Finley and Bohlman are especially attractive and interesting. As the text has to do with eastern species, these do not always correlate with it, but they will very likely

make the book more useful in the West than it otherwise would be.

We have very nicely illustrated here how the current system of bird-names breeds confusion; turn to the paragraph on Shrikes. There are only two species of Shrikes in the country—the Northern Shrike and the Loggerhead Shrike. The Loggerhead Shrike is divided into several geographic races, and this, aside from the fact that they are such, which is not mentioned, can certainly have no interest for the students for whom the work is intended; yet we find the names, Northern Shrike, Migrant Shrike, [a race of the Loggerhead], and Loggerhead Shrike all with the same emphasis, illustrated with a photograph of the California Shrike [also a race of the Loggerhead]. Practically the photograph of the California Shrike is a good illustration of the Loggerhead Shrike, but the reader has no more means of knowing this than that the illustration of Black Phœbes on an ensuing page is of an entirely different bird from the Phœbe mentioned in the accompanying text.—J. T. N.

A MONOGRAPH OF THE PHEASANTS. By WILLIAM BEEBE. In four volumes, Volume I. Witherby & Co., London, 1918. R. 4 to. 198 pp.; 19 full-page colored plates of Pheasants and 15 photogravure plates of their environment, etc.; 5 distributional maps.

For several years the bird-students and bird-lovers of the world have known that this monograph was in preparation and have awaited its appearance with keen anticipation. They cannot be disappointed in Volume I, which takes up the pheasant-like Blood Partridges and Tragopans, the Impeyan Pheasants and Eared Pheasants, seventeen species in all, of which several vary into geographic races.

This volume also contains an introductory discussion of the group in general, the habits of Pheasants, their place in nature and relation to man. Here we find generalizations and suggestions of very

great interest to every naturalist, whether or not he accept them in their entirety. The publication of this first volume follows something like nine years' more or less continuous study of Pheasants, the initial seventeen months of which comprised extended exploration of their habitat in Asia and Malaysia, with the purpose of becoming familiar with each of the different kinds in life. The author's resultant thorough familiarity with the birds not only gives his statements the stamp of authority but has enabled him to write of Pheasants with unusual ease and clearness, whether presenting details of plumage or hypotheses of evolution.

The Pheasants are not a large group and most of the species possess strikingly beautiful plumage. They rank high as game birds, are readily kept in captivity, and in general have long been well known, though the inaccessibility of their haunts has prevented earlier ornithologists from becoming familiar with many species in nature. They lend themselves to elaborate monographic treatment, in fact, have been monographed before by Daniel Giraud Elliot, 1872. The merit of such a monograph is, then, not in difficulties to be overcome in preparing it, but in its excellence.

The best talent has been secured in preparation of the plates, those in the present volume by G. E. Lodge are remarkable for poise and atmosphere; those by A. Thorburn are particularly life-like, the bird very skilfully placed in its environmental background; and one is by C. R. Knight, master of color—all these artists recognized for the ability and accuracy of their work. Plates by H. Grönvold, of plumage details of the young, one of wattles of cock Tragopans and one of eggs, are excellent. One feels that lavishness in the matter of illustrations and make-up is in keeping with the author's having given unsparingly of his best in preparing the work and making the studies on which it is based.

In our opinion, this volume is the most enjoyable, important and satisfactory book of birds recently published, and we

hope that the succeeding volumes will not be long delayed.—J. T. N.

The Ornithological Magazines

THE CONDOR.—The opening number of Volume XXI of *The Condor*, for January, 1919, presents an unusually varied contents in six general articles and a number of short notes. Mrs. Bailey's 'Return to the Dakota Lake Region,' continued from the last volume, is devoted largely to an account of the habits of various marsh birds. Dawson's 'Solitaires of Shasta,' illustrated with five figures, is an interesting description of six nests of Townsend's Solitaire, each containing from two to four eggs, discovered near the timber-line on Mount Shasta, Calif., in July, 1916. From observations extending over a period of two weeks, the author estimates the number of Solitaires on Mount Shasta as approximately 1,500. Kitchin contributes an illustrated account of the 'Nesting of the Short-eared Owl in Western Washington.' The nests observed were located in rather open sites on the edges of sloughs in a tidal marsh near Tacoma.

The question of whether birds mate for life is discussed in two articles by Law and Carpenter, and several instances are mentioned by the latter author which seem to support the theory in the case of certain species.

Under the title, 'Parasitism of Nestling Birds by Fly Larvæ,' Plath presents the results of careful observations and experiments on 63 nests, representing six species of birds. "Of these, 39, or nearly two-thirds, were infested by blood-sucking fly larvæ." Birds such as Goldfinches and Linnets, which build compact nests, showed a larger proportion of infection than those like the California Brown Towhee which have nests of looser construction. This important subject merits much more attention in the field.

Among the brief notes, Grinnell gives a list of twenty-three 'Recent Additions to the California State List of Birds,' which brings the total number of species and subspecies up to 564.—T. S. P.

Bird-Lore

A Bi-Monthly Magazine

Devoted to the Study and Protection of Birds

OFFICIAL ORGAN OF THE AUDUBON SOCIETIES

Edited by FRANK M. CHAPMAN

Contributing Editor, MABEL OSGOOD WRIGHT

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Bird-Lore's Motto:

A Bird in the Bush Is Worth Two in the Hand

BIRD-LOVERS of America are privileged to have enjoyed (we should rather say to enjoy) the companionship of a great man, Colonel Theodore Roosevelt. To those of us who knew him personally, that companionship will certainly always be a very real and living thing.

Whether we like it so or not, this world is one of change. The circumstances, the pleasures, the opportunities, and the friends of yesterday are not those of today. The present is an intangible point which scarcely exists, if at all. A moment does not register on our consciousness until it is already past and a mere memory. Looking back, we are sometimes tempted to wonder if it is really we who wake up in the mornings of 1919, we who lived in the nineteen-hundreds, the nineties, or the more distant eighties, or whether our selves of other years have not migrated to our sons.

An acquaintanceship with birds helps faith in the permanence of the things worth while, the things we love, in the face of an ever-changing kaleidoscope of time. As with each recurring spring we look forward to and welcome back the migrants from the South in regular succession, our own youth is renewed with that of the woods and fields. With waning winter we begin to hear the Song Sparrow's refrain; members of the flocks of Juncos along the hedges chase one another in exuberance and burst into simple tinkling trills. This year, as early as March 1, scattered Robins are back on Long Island, going quietly about

their accustomed haunts, or signaling as they take wing from the tree-tops for companions who have not yet arrived. The call of the Bluebird drifts down to us from now here, now there in the sky, as though he were a shuttlecock in the losing game Caurus plays against the sun; Grackles fly about the towns, clanging defiance of surprises winter may yet have in store, and restless flocks of male Rusty and Red-winged Blackbirds appear in the swamps, following close upon the heels of retreating winter. Before this BIRD-LORE reaches its readers, the Robin chorus will be in full swing from the tree-tops at dawn, and we shall hear the notes of the Phoebe. The flock of Red-winged Blackbirds will be chattering in the swamp as it did thirty years ago, though its personnel has changed many times since then, as the feathers of each bird change each year.

Once tap the springs of memory and not only time but space are annihilate. Over the broad wastes of the central Pacific Ocean, trade-wind-blown Tropic-birds are still courting the sun as on my first outward voyage. I may see the Red-wings if I wish tomorrow, but so far as I can now tell, these Tropic-birds will never again be within range of my field-glasses. Yet they are, if anything, the more real of the two. I scarcely need close my eyes to see their white forms circling over the blue water, smell the clean wind, hear the spray strike the vessel's rigging, and feel the staggering decks underfoot and the warm sun streaming down between the fleecy clouds.

Colonel Roosevelt, had he been spared, would now be enjoying the ever-wonderful return of spring, not only in the general way in which everyone enjoys it, but with recognition and appreciation of each species of bird as it arrived at Sagamore Hill. For he himself was a bird-student—the slayer of grizzlies and elephants took keen pleasure in observing migrant Warblers with an opera-glass. When but twenty years of age, he published a paper on Oyster Bay birds, and even during the strenuous days of his Presidency he took time to note those which visited the White House grounds, and to keep a list of them.

The Audubon Societies

SCHOOL DEPARTMENT

Edited by ALICE HALL WALTER

Address all communications relative to the work of this department to the Editor, 67 Oriole Avenue, Providence, R. I.

HIGHER STANDARDS

More than once a plea has been made in these pages for higher standards in teaching and reaching people not only along the lines of nature-study but in educational work of all kinds. A very definite and sane criticism appeared in the December issue of the *Nature-Study Review* by W. G. Vinal, who strikes at the heart of this matter in an article entitled 'First Grade Readers,' wherein he exposes the flimsy sentimentality and actual lack of observation of common phenomena shown by the well-meaning but uninformed authors of certain school-books that are supposed to introduce our children to the great outer world. Without going into a discussion as to the place and value of fairy-tales, myths and folk-lore in the education of boys and girls just entering the grades, it is wise to lay stress on the fact that no eyes are quicker to see and no minds to receive impressions, often lasting impressions be it said, than those of young pupils. For this reason, if for no other, care should be exercised as to how far the unreal, should take the place of the actual, or how far imagination should be pushed beyond observation. Certainly, all affected, sentimental, and unwholesomely infantine methods should be frowned upon. Children have a high regard for real things, for the reasons why those things are as they are, and although they may not understand the fragmentary explanations and hurried answers of their elders, often grudgingly vouchsafed them in reply to their eager questions, they at least perceive the difference between what rings true and what does not.

It is possible that if we ourselves, in our very early stages of education, had had a better start in becoming familiar with common facts, we might now be in a far better position to enjoy life, nature, yes, and friends, and to share our attainments with others.

In a word, let us see to it, now that a general reconstruction is going on along so many lines, that this and coming generations be taught more intelligently and with greater sincerity and clarity. It is painful to reflect upon the number of bright boys and girls who are given an irrational, inadequate, or partially misleading conception of Nature, and who arrive at maturity with minds focused on shams, unmeaning details, and useless methods.

Mr. Roosevelt has been lauded justly for his splendid achievements, but no single contribution that he made to us as a nation surpasses his fine conception of life based on a normal and truthful appreciation of nature. A delicate

child, he was scarcely the one to be selected for the strenuous pursuit of nature with which we are now familiar and which has added fame to his attainments. He reached out and won health and an abounding life by seeking the true approach to the world about him. Most of his admirers who are acquainted with him only through his books should not overlook the fact that among his earliest nature studies is an annotated list of the birds which he identified about his home at Oyster Bay, Long Island, a brief bulletin of a few pages, in which, however, the bird-lover traces his eager observation of what was actually to be discovered within the limits of his home-estate. High up on a north-shore bluff, overlooking the Sound and two of its main inlets, Oyster Bay and Cold Spring Harbor, with the bold promontory of Lloyd's Neck directly to the east, and the lowland of Center Island curving irregularly to the north, Sagamore Hill has a commanding and unusually beautiful outlook upon nature, while to the south, through the winding paths of wooded areas so familiar to Mr. Roosevelt, afoot or on horseback, the charm of almost primeval forests still lingers, despite the sad inroads of the chestnut fungus disease which has killed so many noble trees, and wartime necessity that has caused the felling of giant walnuts and stately white oaks. Here, if anywhere, one must love nature for what she has to show the truthful observer, and it is fine to recall that Mr. Roosevelt chose to keep his estate in its natural condition of wild loveliness rather than to convert it into a show place of artificial beauty.

He had keen joy in the companionship of the common Sparrows in his fields and of the Screech Owl which at dusk commonly flitted near his porch, in the discovery of the Black-throated Green Warbler, of whose identity as a summer resident at this point on Long Island he felt certain, in the migratory movements of the Fish Crow and the late appearance of a straggling Black-crowned Night Heron, simple facts in themselves, based upon true observations, but facts which were woven into his daily life, giving it true focus and constant enjoyment.

It is such a grasp of nature that I plead may be made possible to our boys and girls, and especially to those who must depend largely upon books about nature, since the outdoor world is paved beneath their feet and walled from their eyes in our large cities.—A. H. W.

BIRD AND ARBOR DAY THOUGHTS

THE TREES OF ENGLAND

"The trees of England! While she hath her trees
She hath great virtues still! While formal yews
Guard her trim gardens, she can never lose
Homes for her scholars, men of learned ease.
And while her pines stand stark against blue seas
Murmuring of yet bluer seas to cruise—
Her sons, that hear them, as of old shall choose

THE HUMPHREY

Words from St Nicholas, by permission of
The Editor, of the "Lancashire Echo"

First 1st

1st stanza
 do you stay here in
 Sparrow, on stone and
 do you stay here in
 Sparrow, on stone and

1st stanza
 do you stay here in
 Sparrow, on stone and
 do you stay here in
 Sparrow, on stone and

2nd stanza
 Who can bring them news
 Who can bring them news
 Who can bring them news
 Who can bring them news

2nd stanza
 Who can bring them news
 Who can bring them news
 Who can bring them news
 Who can bring them news

3rd stanza
 Who can bring them news
 Who can bring them news
 Who can bring them news
 Who can bring them news

3rd stanza
 Who can bring them news
 Who can bring them news
 Who can bring them news
 Who can bring them news

4th stanza
 Who can bring them news
 Who can bring them news
 Who can bring them news
 Who can bring them news

4th stanza
 Who can bring them news
 Who can bring them news
 Who can bring them news
 Who can bring them news

5th stanza
 Who can bring them news
 Who can bring them news
 Who can bring them news
 Who can bring them news

5th stanza
 Who can bring them news
 Who can bring them news
 Who can bring them news
 Who can bring them news

To quit her peace, and though it burn or freeze,
To win for her in grim and perilous realms
New and great glory. With her mighty-thewed
Oaks shall abide her spirit bluff and strong;
And while her winds are prayerful in great elms,
Poets shall seek her haunts of solitude,
And English leaves shall murmur through English song."

—GEOFFREY HOWARD, in *The New Wilness*.

"Much can they praise the trees so straight and high,
The sailing pine; the cedar proud and tall;
The vine-prop elm; the poplar never dry;
The builder oak, sole King of forests all;
The aspen good for staves; the cypress funeral;
The laurel, meed of mighty conquerors
And poets sage; the fir that weepeth still;
The willow, worn of forlorn paramours;
The yew, obedient to the bender's will;
The birch for shafts; the sallow for the mill;
The myrrh sweet-bleeding in the bitter wound;
The warlike beech; the ash for nothing ill;
The fruitful olive; and the platane round;
The carver holme; the maple, seldom inward sound."

—SPENSER, 'Faerie Queene.'

"'Tis sweet, in the green Spring,
To gaze upon the wakening fields around;
Birds in the thicket sing,
Winds whisper, waters prattle from the ground;
A thousand odors rise,
Breathed up from blossoms of a thousand dyes.
Shadowy, and close, and cool,
The pine and poplar keep their quiet nook;
Forever fresh and full,
Shines, at their feet, the thirst-inviting brook;
And the soft herbage seems
Spread for a place of banquets and of dreams."

—BRYANT.

"Where roads are made I lose my way,
In the wide water, in the blue sky there is no line of a track,
The pathway is hidden by the birds' wings, by the star-fires, by the
flowers of the wayfaring seasons.

And I ask my heart if its blood carries the wisdom of the unseen way."

—RABINDRANATH TAGORE, 'Fruit-Gathering.'

SUGGESTIONS

1. Reread Longfellow's 'Hiawatha,' noting the references to nature, especially trees and birds.
2. Read 'The Fountain' and 'The Prairies' by Bryant.
3. In the foregoing selections, note carefully the descriptive words used by the poet, and look up the meaning of any words with which you are not familiar.

4. Send to Enos A. Mills, Long's Peak, Estes Park, Colo., for cards entitled, 'A Little Tree,' and 'The Trail.'

5. Look up in *School Education*, October, 1917, an article on 'Bird Migration,' by Indianola Willcuts, which contains very helpful directions for schoolroom exhibits and bird-study.

6. If you wish a practical field notebook, try the 'Bird Tablet,' arranged by Josephine A. Clark, Northampton, Mass.

7. Have you seen the poster stamp 'Protect the Birds' which is issued by the Cleveland Bird Lovers' Association?

8. Consult 'The Natural History of the Farm,' A Guide to the Practical Study of the Sources of Our Living in Wild Nature, by James G. Needham, The Comstock Publishing Company, Ithaca, N. Y. This book is full of material for the wide-awake teacher, and of interesting information for the enthusiastic student.

9. Following the suggestion of Dr. A. F. Blakeslee, study a single tree throughout the year, noting its appearance from different sides, its changes, activities and uses.

10. Learn to associate birds with trees, remembering what trees are the homes of certain nesting-birds. Are there any kinds of trees in which birds seldom or never nest?

11. Make Bird and Arbor Day a time for personal observation.

12. Have the English Sparrow and Starling increased near you in the last year?

—A. H. W.

JUNIOR AUDUBON WORK

For Teachers and Pupils

Exercise XLIV: Correlated with Botany, Reading and Food-Supply

POULTRY, continued, AND SUGAR

"It is now high time to plan for crops to fill the crops of fowls and chickens next fall and winter. It may not be convenient for many who keep poultry to raise wheat, oats, barley or buckwheat, although these make excellent feeds which may be fed right in the shock or bundle, letting the hens work out the grain, and can therefore be easily handled. Indian corn, sweet corn, pop-corn, and sunflower seed may all be raised to advantage in the same yard as growing chickens. As soon as the plants get well up, if chicks are small they will do no harm until the corn is ready for picking and even then the damage will be slight, compared with the benefits received. The cultivation of the ground makes it more beneficial to both plants and chickens, and the growing corn provides shade for the poultry in exchange for the fertilizer produced and the insect life destroyed. Sunflower seed is an excellent food for both chicks and fowls, but on account of the large amount of oil they contain, they must be fed sparingly. Sugar-beets and mangel-wurzels are without doubt the best root crop to raise for poultry. There are several varieties, but the 'Mammoth Long Red' is one of the largest and best.

"The land must be well broken up, deeply plowed and well fertilized. Lime should be used in addition to other fertilizer if soil is acid. Salt at the rate of 300 pounds per acre may be added to take the place in part of potash. Plant seed by hand or with a planter, in rows $2\frac{1}{2}$ to 3 feet apart, and thin to 12 or 14 inches apart in rows, at last hoeing. The extra plants pulled or cut out make excellent greens for the fowls in yards during the summer. Harvest just before the ground freezes and store in a dry cellar for future use."—*Extension News Service of Rhode Island State College.*

Now that we have learned how to make successful 'war gardens' and how to keep



POULTRY HOUSE AND INCLOSED YARD USED ON A HOME LAWN IN THE CITY



WASTE GREENS FROM AN ADJOINING WAR GARDEN ADDS TO THE FARE OF THE POULTRY

poultry in small quarters let us not give up such practical projects, since we may not only gain from them more real knowledge and serviceable methods than by studying books alone, but may also add much healthful food-material to our family store. The young woman whose experiments in raising chickens in a patent house which accommodates twelve or fourteen hens, has found a *multum in parvo* (much in little) method of keeping her home table supplied with fresh eggs and poultry, as well as having a surplus to dispose of in various ways.

A neighboring artist reports similar success, and would not care to give up so pleasant and profitable a form of home economics as he has discovered in a small flock of poultry. Besides the food value of the project, the chickens are pets for the children and are also used to teach principles of thrift.

Days of peace, we trust, are coming, but if we wish to make certain of them, we must do all in our power to cultivate habits of thrift and to practice helpful coöperation. Sugar is a very good article upon which to base simple experiments in thrift, for the reason that we have so long been accustomed to use it lavishly. If a few lessons might be devoted to this topic in connection with nature-study work, the result would be a better balanced conception of the whole matter than if only a chance reading or remarks were made with reference to the nature and value of sugar.

The following outline may suggest a workable method of presenting this important subject in the classroom or in community exercises where parents and home-makers may also be reached.

SUGAR, ITS NATURE, PREPARATION, USES, AND VALUE

- | | | |
|-----------|---|--|
| LESSON I. | { | VEGETABLE— |
| | | Sugar-cane, sugar-maple, sugar-beet, maize, sorghum, birch, parsnip,
sugar-pine, Indian honey-bearing reed. |
| | | ANIMAL— |
| | | Milk-sugar (made from whey), bees' honey. |

Look at pictures of all the sugar-producing plants and trees commonly used for making sugar, and learn to name the most important ones. Learn also to how great an extent sugar in some form is found in vegetables, fruits, and grains.

Study the sugar-maple, the sugar-cane and sugar-beet more thoroughly, and write notes on the particular qualities of each with reference to the production of sugar.

Compare the sugar-maple with other species of maple.

Compare the sugar-cane with sorghum and with other species of grasses.

Compare the sugar-beet with the mangel-wurzel and other varieties of beets, and also with other root-vegetables.

Look up the sugar-pine and note where it is found. Make a classroom picture-book of all sugar-producing forms of vegetable life and learn where they grow. How is bees' honey related to vegetable products? Would you classify it as animal or vegetable product, or both?

LESSON II.

What part of the tree, plant, grass or vegetable produces sugar? What is the name or names of manufactured sugar?

Does the amount of sugar-material, such as sap or juice vary at different seasons of the year?

When is maple-sugar made?

When are cane-sugar and beet-sugar made?

Study the different processes of manufacturing sugar from vegetable products.

(See Encyclopedia Britannica, Century Dictionary, cut under 'sugar-mill'); send to the United States Department of Agriculture for bulletins on the manufacture of cane-sugar, sorghum, beet-sugar and maple-sugar, also, bees' honey.

LESSON III.

What is the principal use of sugar?

As a food for man, learn the meaning of the term *carbohydrate*.

How many different forms of manufactured sugar can you name, telling from what source each is derived? e. g. Brown sugar, confectioner's sugar, granulated sugar, pulverized sugar, cut sugar, crushed sugar, Malado sugar, liquid sugar, syrup, honey, loaf-sugar, malt-sugar.

How many products can you name which are manufactured from sugar by chemical processes?

How is starch converted into sugar? (Correlate with physiology.)

What is glucose? dextrose? cellulose? maltose? lactose? saccharose? quercite?

Name as many commercial uses of sugar and sugar-products as possible. Are there any uses which should not be allowed? e. g. Sugar used to weight silk?

Study the history of the use of sugar among different nations.

How early was the first use of sugar and among what people or peoples?

LESSON IV.

Study the value of sugar, as an article of food and as a commercial product.

How does sugar act upon the human body as a food?

What is its fuel-value per pound (number of calories)?

Compare it with other foods.

Is it easily digested? is it nourishing, stimulating, heat-producing, or a clog to the system?

In what quantity should it be eaten for health?

What is the food-value of the sugar contained in fruit and other vegetables and products not used for making sugar?

Does one need to eat a large amount of artificially manufactured sugar in order to supply a proper amount of carbohydrates to his diet?

In what form is sugar most healthful, pure or manufactured into mixtures such as confections, pastries, candy and jellies?

Study the commercial value of sugar, with reference to its production in different countries.

What countries manufacture cane-sugar? beet-sugar? maple-sugar? sorghum? other sugar-products of commercial value?

GENERAL QUESTIONS AND SUGGESTIONS.

What animals other than man like sugar?

Do any birds like sugar? Can you name a species?

Look up Sugar-bird, Honey-eater, Sap-sucker.

Do animal-tamers ever use sugar in coaxing animals to do tricks?

How is sugar connected with disease?

Is sugar of value in medicine?

What birds nest in the sugar-maple? in or about sugar-cane grown in the United States?

Two practical ways in which boys and girls can study sugar, are, first, to make some sugar from sap or sweet juices, and second, to learn how to use sugar in combination with other articles. Try jelly-making and learn how to make jelly with varying amounts

of sugar. The well-known recipe of 'pound for pound,' that is, one pound of sugar boiled with one pound of fruit-juice is extravagant in these days of thrift and conservation.

Very delicious jelly can be made by using one-half, one-third and, with certain fruit-juices, one-fourth part of sugar to one part of juice.

Experiments: Study *solubility, crystallization, extraction, evaporation, purification* by putting sugar in water, boiling a piece of sugar-cane, or maple-sap, or sliced beet-root, and noting the varying appearance of the boiling juice, and at what stages scum occurs and crystallization.

Write compositions upon the different processes of making sugar. Keep account of how much sugar you use a week, month, or year, and compare these records with a view to determining the proper use of sugar.—A. H. W.

For and From Adult and Young Observers

NOTES FROM THE NORTHWEST

We are so much interested in birds here at Newlands school that the Bird Club asked me to write a letter to you.

There are a great many birds here, such as the Kingbird, Flycatcher, Loggerhead Shrike, Cowbird, Towhee, Meadowlark, Chestnut-collared Longspur, McCown Longspur, many different kinds of Sparrows and a great many Prairie Horned Larks. The Prairie Horned Lark is a bird that stays with us both winter and summer.

On March 1 we began to record birds and now we have about fifty different kinds.

At our Bird Club meeting we have each member report what they have seen of bird-life in the field. We would like to know how we could attract more birds around the school where there are no trees.—WILLIE TODD, Secretary, Nobleford Bird Club, *Nobleford, Alberta*.

[For those of our readers who are unacquainted with the physiography of Alberta, a description of its climate, topography, and fauna and flora is worth looking up, since it is so varied a region. The writer of these notes from Nobleford, evidently lives in the prairie section, where there are no trees. The species of birds enumerated, it will be noticed, are mostly ground-feeders and dwellers. Attracting birds in such a locality presents, of course, some difficulties, but it seems as though a lunch-counter properly made, and, if necessary camouflaged with grasses, might, if covered with seeds that these birds relish, attract many.

Can anyone who is familiar with prairie conditions suggest a practical way to arrange a lunch-counter? A birds' drinking fountain or a pool for bathing might attract more birds than a lunch-counter, unless their food-supply becomes much reduced. As the snowfall is not heavy usually in Alberta, seed-eating birds doubtless find winter foraging less difficult than in localities where snow and ice prevail during winter.—A. H. W.]

SIOUX CITY BIRD CLUB NOTES

In the September-October number of BIRD-LORE, I notice a paragraph speaking of a column in the *Pittsburgh Chronicle-Telegraph* devoted to birds.

As we have entered on our third year of work of this kind in the press, you might be interested to know of it. The column devoted to "Our Bird Neighbors" is published every other Saturday and we are led to believe it is of interest outside of our city, for we receive many letters of commendation, one university writing that the articles therein are kept on file, while a principal of a school in a smaller town reports that they are put up on the school bulletin board as soon as received.

Our next issue will contain a list of forty-five birds seen by the writer during the month of October, 1918. We have a Bird Club here of about sixty members, which is not so large as before war activities took so much time. A Junior Club of over one hundred members has been held in suspension during the period of the war since leaders of the groups were not available.—(Mrs.) MARY L. BAILEY, *Sioux City, Iowa*.

[The column of bird notes, referred to under the title: "Our Bird Neighbors," is made up of observations in the vicinity of Sioux City, and constitutes a local bird-calendar of much interest, as well as preserving in permanent form many incidents of timely value. In addition to seasonal notes, this column is made additionally attractive by various bird happenings and experiences, such as this, for example: "A new bird-bath in a North Side yard was eagerly watched by members of the family to see what birds would help to dedicate it. Imagine the surprise and pleasure of the watchers when a Pheasant stepped in daintily to taste of the water! Where did it come from? Is there someone near who owns one for a pet, or did it only stop in passing? The Ring-necked Pheasant is not unknown here, but it is by no means common."

Those who are familiar with the tricks and activities of the Crow will enjoy the account given below of a pet Blue Jay.

The following story was written for the Bird Notes by Mrs. John M. McDonald, of our city. It is of especial interest because it is true in every detail and also because it belongs to an early period of our development as a city:

On the 4th of July, 1890, while taking a family drive in the woods at Riverside (then unknown to park fame) a young Blue Jay was discovered at the roadside, evidently having fallen from the nest and unable to help itself. It was rescued by the 'good man of the house,' and brought home in a handkerchief.

Hunger forced it to adapt itself readily to its new surroundings and in a short time it would eagerly swallow food such as flies, worms and other insects dropped into its wide-open beak by its new-found friends.

The little fellow matured sturdily, and, never being caged, but having the entire freedom of the house and yard, going and coming at will, he developed many cunning and remarkable habits, and was a constant source of delight throughout the summer, on into the late autumn, when after several flights and returns he departed.

To the one member of the family that gave him the most care, he became greatly attached, flying after her to the street as she was about to take the car, and sometimes following her inside.

The motorman, in those days of common interest with the North Side dwellers, and not being overly busy with passengers, would carefully hide the little fellow until upper Jackson street was again reached, when he would stop and take him toward the house.

On one of these attempts to see more of the world, Jay succeeded too well. As usual, this motorman had placed the protecting hat over him on the seat, but a passenger, a man at that, with great curiosity, hearing the scratching lifted the hat and away flew

Mr. Blue Jay. It being a strange part of the town it was several days before he found his familiar landmarks, but one day our maid ran in excitedly to announce his return.

As it was impossible for Jay to open doors or windows for himself, he would come to the window-sill to be let out, and when coming in would light on the top of the screen frame to tap sharply on the glass. If he failed to get a response in one room he would try another.

He was particularly fond of butter and at meal-time would perch on the gas fixture in the hall, from where he had an unobstructed view of the dining table, and when butter was being served he would, with unerring aim, swoop down across the table, getting his mouth full.

If he were not to be found at feeding time, one had only to stand outside and extend the arm with food in the hand, and almost immediately from out of space, Jay would appear.

To one member of the household, only, he appealed for his bath, and his wants were always heeded. A cover was spread on the floor, a large basin filled with water and put down, and one would think a new automatic fire extinguisher had been turned on.

Another amusing instance: The dear mother was quilting that summer and Jay seemed to enjoy keeping her company, flying in and out of the room and trotting around on the frames, but the quilter was too busy putting in the beautiful stitches to notice what the tiny companion was doing. In the winter, however, when finishing the edges of the quilts, her needle would strike against buttons, sticks, pebbles and anything Jay was able to tuck away in the cloth.

Belonging to the magpie family he was not particularly honest, and if we missed anything, from a diamond earring to a door key, we knew Jay had hidden it somewhere, and at times it required a diligent search to find the missing article; but when in hot weather a bit of raw meat had been carefully secreted under the bed on the slats, we were very thankful that our sense of smell directed us to the hidden dainty.

Jay had a most unusual marking on his head, a single feather about two inches long growing from the tip of the crest, which, added to his saucy, bold manner, gave him quite the air of a Mephistopheles.

It seemed cruel to cage the joyous creature through the long winter, so, after many family councils, it was decided to let him follow his natural instincts, which took him away finally.

We missed the brilliant flash of color and the companionship of our little pet, and even now on hearing the challenging note of his kind we recall that happy summer with our own Blue Jay.—*Sioux City Daily Tribune*.

This method of educating public sentiment in regard to birds and bird-protection is especially helpful, when spontaneous coöperation underlies it.—A. H. W.]

SUCCESSFUL SCHOOL OBSERVATION CONDITIONS

The observations of my fourth grade have been withheld as long as possible. Enthusiasm runs high, and our fifteen-minute bird-talks on Friday mornings are entirely too short. Our study club meets every two weeks. At this time the leaflets are carefully studied and additional material discussed.

With spring near, I am planning a contest. The child seeing, identifying, and entering in his bird record, the most birds during spring migration, at least fifteen, is to receive Reed's Bird Guide.

A similar contest for the identification of wild flowers is being planned.

Our schoolhouse is an annex, situated near a yard of fruit trees and shrubs. A quince bush, elder bushes, and two apple trees touch our three south windows, while peach trees and maple trees touch the southwest and west sides of our house.

Just outside our center south window we have a feeding-board. Cardinals have visited all winter, with Tufted Titmice occasionally. While the Cardinals are feeding, the children often skip past the window, but our Cardinals are rarely frightened away. The first Cardinal whistle was heard January 18, about 7.45 A.M., (just before coming to school).

This, of course, is an ideal spot for birds. Last spring, Redstarts were quite numerous, even sitting on the window-sills of our open windows. From the windows we saw Black and White Warblers, Redstarts, Myrtle Warblers, Kinglets, and Vireos, besides our Downy and Hairy Woodpeckers, Flickers, Goldfinches, Tufted Titmice, and Blue Jays. The entire class saw these.

Do you think there is a reason for enthusiasm?

Our building is an annex to the grade and high school building. We have recess both morning and afternoon. The birds are not frightened away but rather seem to enjoy the children's laughter and romping.

Can you blame me for hoping for another spring similar to last year's?—
ALMA MILLER, *Galion, Ohio.*

BIRDS THAT HAVE COME TO OUR HOUSE

I have made bird-shelves. Nuthatches, Chickadees, Fox Sparrows and the Cardinal have come. In the morning we often hear the Cardinal. Once the Sparrow Hawk made us a visit.—JACK STEELE (Aged 9 years).

[The writer of this contribution is now fourteen years old, and has doubtless had much more experience in feeding and protecting birds. We should be glad of his address and also of any further notes he may have made during the last five years.

Comparisons with this record during the successive seasons which have elapsed will prove helpful not only to him but also to our readers.—A. H. W.]

THE WESTERN ROBIN

Bailey's 'Handbook of Birds of the Western United States' says of the Western Robin: "He nests in the mountains or far north, and when seen in winter is shy and nervous." 'The Birds of California' says, "He goes up into the lonely Sierra Nevada forests." From these quotations it would seem that the Robin is shy and nervous in the West; but 'The Birds of Oregon and Washington' says: "The Robin is a common bird." The first two observations are undoubtedly from California, while the last is from Oregon.

I live in Portland, Oregon, where the Robins are both common and tame. Even as I write I hear their beautiful song which rings loud and clear in the early morning and at intervals through the day, and then again before going to bed. They bathe in my garden, and in winter eat apples which I put out

for them. In fact, I know of a nest across the street from the post-office which is in the heart of the city. There is also a nest in our climbing rose.

This year I was favored with a trip to California on which I took pleasure in finding the truth about the Robins. In the spring, when I made the trip, I did not see a single Robin until I visited Yosemite National Park; there they were common and quite tame, too. They were probably nesting, but I did not succeed in finding any nests. Again the 'Birds of California' says, "The nests also of the western Robins that I have found have been somewhat different from those of the eastern bird and very much prettier, being decorated with moss woven in the mud instead of straw, and carefully lined with moss." This is probably because moss is easier for the forest Robins to get than straw, and in the city it would be almost impossible to get moss, so that the eastern birds have acquired the habit of using straw and the California birds the habit of using moss. Many of the nests in Portland have no moss in them. The nest in our climbing rose has a foundation of twigs and straw and a mud cup lined with grass. There is also much string and yarn, which I supplied, woven in. I found a good many Robins' nests this year, built in many different ways and in many different locations. One of them contained a great deal of moss, but a great many had none. In most of them the lining was all pushed down into the bottom of the nest by the time the birds were through with it. From one nest straw hung down for over a foot, making it very conspicuous.

Now the question arises, What makes the Robin nest far from the homes of man in California, while in Oregon it is very tame? It seems to me the only way to explain this difference is that it is due to climatic conditions. It might be better to say that the Robin goes to the mountains where it is cool, rather than to say that it goes far from the homes of man. By watching Robins on a hot day it certainly is apparent that they do not like the heat. They keep their bills wide open, panting, and I have seen an old male Robin spread its wings out and lie down in a flower-bed as if from sunstroke. Then it would get up and go on hunting for worms. The 'Handbook of Birds' says that the Robin is shy and nervous in winter; but this is easily accounted for because Robins are usually more nervous in winter anyhow.

Individual peculiarities are often observed in birds, especially in the Robin since it is so common. I once saw a Robin with a very curved bill, the upper mandible extending far out beyond the lower. The other day I saw a young Robin, the speckles being very prominent, molding an old nest. The nest was nearly torn to pieces, but the young bird arranged it with its bill and molded it with its breast as if it were building a new nest. However, nothing ever came of it as the task was abandoned before anything was accomplished. This may be a proof that the bird was working an account of an instinct which matured too soon.—TOM McCAMANT, *Portland, Ore.*

[The spirit of investigation, careful observation, and comparative study shown in this composition written by a boy of thirteen, deserve commendation.—A. H. W.]



CANADA GOOSE

Photographed by H. H. Pittman, Manitoba, Canada. The photograph is of a wild bird suspicious, but not alarmed, taken in a little runway by which a hiding-tent had been placed

The Audubon Societies

EXECUTIVE DEPARTMENT

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Address all correspondence, and send all remittances for dues and contributions, to the National Association of Audubon Societies, 1974 Broadway, New York City.

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Any person, club, school or company in sympathy with the objects of this Association may become a member of it, and all are welcome.

Classes of Membership in the National Association of Audubon Societies for the Protection of Wild Birds and Animals:

\$5 annually pays for a Sustaining Membership
\$100 paid at one time constitutes a Life Membership
\$1,000 constitutes a person a Patron
\$5,000 constitutes a person a Founder
\$25,000 constitutes a person a Benefactor

FORM OF BEQUEST:—I do hereby give and bequeath to the National Association of Audubon Societies for the Protection of Wild Birds and Animals (Incorporated), of the City of New York.

SUMMER SCHOOL AT AMSTON

Great progress has been made with our Audubon ornithological experiment station and summer instruction project at Amston, Conn. To secure funds for the enlargement of the work, an organization has been formed comprising prominent men in Connecticut, and known as The Amston Game Club. The main purpose is to develop large, practical, game-farming operations and varied lines of experimental research in practical bird-work, with also some recreational and social features. Game Commissioner F. N. Manross is president, and Colonel Louis R. Cheney, ex-mayor of Hartford, vice-president. The enterprise is in charge of Herbert K. Job. One of the most expert professional gamekeepers in America is permanently employed. Formerly he was gamekeeper to the King of England at Windsor Castle. This summer Pheasants, Quails, and wild Ducks will be raised on an increased scale, and other species experimentally, including an experiment in commercial breeding of Canaries.

This great tract of diversified country, with its large and beautiful lake, together with abundance and variety of wild bird life, interesting and instructive game-farm operations, and a growing constituency of

nature-lovers, makes Amston an ideal spot to spend a vacation.

The Summer School project begun last season gave encouraging results, and it will be continued and enlarged for the season of 1919. There will be two sessions, each of three weeks. The first, from July 5 to 25, will offer courses in field ornithology, general applied ornithology, or practical methods in attracting and propagating wild birds, and also nature photography, plate and motion pictures, with practical field demonstrations. The second session, from July 26 to August 15, will be a school of commercial and practical game-farming, to prepare landholders, farmers, or others, to raise game-birds and wild fowl. There will be lectures by visiting specialists, and recreational features. Students and visitors will be accommodated at The Amston Inn, and will be welcome at The Audubon House headquarters, with bird collection and working ornithological library, all being open after the latter part of May. Clubs and parties may arrange for outings. A few furnished cottages may be had on early application.

Information and circular may be had from Mr. H. K. Job, West Haven, Conn.

SUMMER SCHOOL WORK AT TAHOE

The Bureau of Education, Publicity and Research of the California Fish and Game Commission has outlined an attractive course in wild life study to be given the coming summer at Tahoe, Calif.

In the announcement just issued the statement is made: "Everyone wants to recognize the plants and wild things encountered on the summer vacation. There is no better way of developing this ability than to accompany one who knows wild life. A competent instructor will take groups of not more than twenty on field excursions where first-hand knowledge of living things will be obtained. Special attention will be given the identification of birds by call, song, color, and habits. The motto of these classes will be: 'Learn to read a roadside as one reads a book.'

Knowledge of wild life insures better conservation of it. Special excursions for children."

Evening illustrated lectures are scheduled for the following subjects: 'Common Song-Birds of the High Sierras,' 'The Game-Birds of California,' 'Sierran Mammals,' 'Wild Animal Life in California,' 'Forest Trees of the Sierras,' 'The Fish and Fisheries of California,' and 'Wild Flowers of the Sierras.'

One can hardly imagine a more beautiful place in the West to study wild life than at Tahoe, and anyone who can take advantage of the opportunity offered above may be sure of spending his vacation in an interesting and most worth-while manner, under the inspiring leadership of Mr. Harold Child Bryant and his associates.

IOWA CONSERVATION ASSOCIATION

The following is contributed by George Bennett, Field Representative of the Iowa Conservation Association.

"The purpose and work of our organization are the protection and preservation of the wild life of the state, and the founding of city, country, state and national parks. Its membership has been largely increased within the last two years, with a future outlook that is bright.

"This Association is actively engaged in promoting the founding of a national park in the northeastern section of Iowa, where there is a magnificent area of wood and water, rock and dell—scenery of the first order. Here the Mississippi flows through appealing natural beauty, whether it be Wisconsin on the east or Iowa on the west, and the time cannot be far away when the bill, already in Congress, will be favorably acted upon, for the setting apart for all time of this great historic and nature arena, for the benefit of the entire citizenship of the United States.

"In connection with such enterprise, a movement is on foot to place on Pike's Peak, the highest point and on the Iowa side, a memorial of that splendid piece of wild life remedial legislation, the Migratory Bird Treaty between the United States and Canada.

"Among the many reasons for such a movement, two specific ones make their appeal. One is that the far-famed Mississippi Valley is the grand central highway of great numbers of birds as they journey from one clime to another. Again, when this national park is established, it will draw on a far larger population than any such park in the distant West, and, standing as it will for the redemption of our bird-life, will tell its story to an ever-increasing multitude that sees on that majestic elevation, where in 1805 Zebulon Pike planted the first American flag that floated to the breeze in the Northwest, a great contribution to a greater cause."

SONG-BIRD KILLING IN GEORGIA

The past few months we have been receiving more than the usual number of complaints of the killing of song-birds in the southern states. Such letters as the following from a gentleman in Macon, Ga., emphasizes most strongly the great need of extending the Junior Audubon work in the southern states, as well as the importance of putting lecturers in the field to arouse the people of that section to the desirability of protecting birds.

The letter in question runs as follows:

"I am writing to inform you of conditions here in Macon which certainly ought to be tolerated no longer, if there is any source of help to which we can appeal.

"During the past few days immense flocks of Robins have entered the city and

they are being shot all over town by the hundreds. Boys and men, both white and colored, are engaged in this wicked business. I am told that they are sold for food. Yesterday—Sunday, by the way—I saw a flock of upwards of one hundred Cedar Waxwings, and they too were the victims of this wicked practice.

"I had supposed that the Audubon Model Bird Law protected all song-birds in every state of the Union at all times. If there is any possible way of offering these birds protection, I should be glad to co-operate with you to that end. To one who has been raised in a state where children are taught, both in school and at home, to love and protect birds, such conditions as prevail here seem almost inconceivable."

AUDUBON ASSOCIATION OF THE PACIFIC

Our young Association at San Francisco entered into its second year with very promising prospects of continued rapid growth and important accomplishments. Many new members were added and strong committees were well launched into their work. The abnormal conditions caused by the war, interrupted, but let us hope only postponed, expected accomplishments. At least seven of our foremost members, Dr. Gibbons, Messrs. Webb, Newsom, Peck, Loeb, McClenahan and Levis, some of them active committeemen, in answering their country's call, made their absence felt. But, on the other hand, we are proud of the representation they give the Association in the country's service and we can thank them for the greater work they performed. The other activities that fell to the part of the civilian also deprived many others of the time and opportunity to do what they would for the good of the Association.

The monthly meetings, however, continued. As much can be said of our monthly field trips, all of which were very successful, both in the pleasure and instruction afforded and the interesting observations recorded.

It behooves us to be vigilant and ready to enlist our services where they may be needed, as, for example, against the purpose to drain the Klamath Lakes, which would destroy a valuable reservation and bird-preserve. It is an unfortunate circumstance that little sympathy has been won from our local press for our work and objects. It might even be stated that we encounter here an opposition that we have to combat, by what means it is hard to outline exactly. For example, the almost violent attacks on the treaty that protects migratory birds, with special reference to ducks, are evidently the outgrowth of fallacious opinions and interested opposition. Enlightenment cannot of itself conquer this hostility. We may, for the present, have to limit our efforts to influencing public sentiment to counteract the effect of malicious propaganda.

Pursuing our plan to study the truth of a question and seek the guidance of scientific experts before taking sides or adopting a course of action, at two of our monthly meetings we had the question of the alleged damage of Ducks to the California rice fields expounded by such authorities as Messrs. Hunter and Bade, Dr. Bryant and

Professor Mackie. The net result is that the Duck, as an accused pest to the rice farmer, is at most incomparably less such than rodents and insects, against which birds are the best combatants, though scantily acknowledged by the same that impeach the Duck. We learned, besides, that even the comparatively small damage actually done to the rice can easily be avoided by the shooting of bombs to scare away the Ducks from the fields, while a better plan is to sow the seed properly, so as to thoroughly cover the ground with the growing crop and not leave exposed puddles for the birds to descend into, where they may begin the damage.

In line with our juvenile program, we have found a fertile field anxiously awaiting our cultivation in the Boy Scout organization. When announcement of intended bird-instruction was made to a theatre full of boys, the enthusiastic reception expressed by them in their loud and prolonged cheers was an imperative demand made upon their elders and those that are able to satisfy their desire for bird-knowledge. Already Mr. Hansen has begun the good work, and as Scout Master of a troop, with the assistance of Dr. Leggett and Mr. Thomas, has begun to instruct them. Soon they will be taught about bird-houses and how to help birds to build their nests, so that they may prepare to aid their feathered chums during the coming housekeeping season.

An effort will be made to publish a monthly bulletin, reporting our activities and containing bird-news, which is to be sent to each member. Every member will be requested to communicate to the Corresponding Secretary any item of interest to the Association, personal observations, and suggestions. By such general and generous support all can help to develop a publication that may be a source of pleasure and pride.

Initial steps have been taken, and the coöperation of the Cooper Ornithological Club secured, to cause the adoption of municipal cat-licensing ordinances.

The success, growth, and value to each

member of the Audubon Association depends upon the interest each takes in its welfare.—C. B. LASTRETO, *President*.

Utah Audubon Society

After seven years of inactivity the Utah Audubon Society has again marshalled its man-power to renew the struggle against the waste and despoliation of its bird-life. Since its inception in 1912, sporadic efforts to carry out a definite program have been unfruitful; but it is hoped that junior organization among the Boy Scouts and in the public schools will soon be productive of inspiration and awakening interest. A meeting held January 2, 1919 resulted in the election of officers for the present year as follows: Prof. J. H. Paul of the University of Utah, president; Nephi Reynolds, vice-president; A. O. Treganza, treasurer; Mrs. A. O. Treganza, secretary.

Buffalo (N. Y.) Audubon Society

The Audubon Society of Buffalo has just completed its tenth year with a paid-up membership of 250 members. The newly elected officers are: Edward C. Avery, president; Dr. Channing E. Beach, vice-president; Mrs. C. M. Wilson, secretary; J. M. Overfield, Jr., treasurer; Miss Mary Ellis, C. Brooks Hersey, and Miss Caroline L. Doll, directors.

The society has awakened much interest in bird-study and bird-protection through its lectures and field-trips. It has published and sold 1,000 copies of its annual Bird Almanac, this year's edition of which was extremely interesting and instructive.—CAROLINE L. DOLL, *Retiring Secretary*.

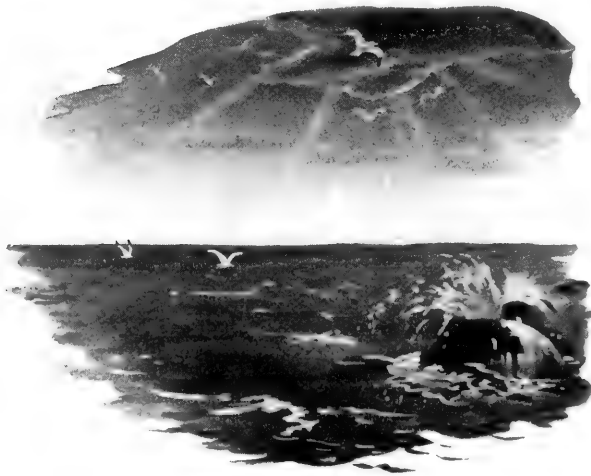
An Interesting Booklet

The 1919 edition of the Doylestown Nature Club's booklet is a most attractive publication. Printed in green ink on white paper it presents a photograph and story of its Museum, list of officers, constitution and by-laws, program of meetings for the year, and list of all the Club's members.

GULLS

By JANE BARBARA ALEXANDER

O gulls, as you circle and swoop and scream,
What is that force which urges you on?
The voice of the wind, like the rush of a stream,
Scent of the sea, or the spray, or the dawn?
Or is it the sun with his buoyant rays
That thrills you to madness and whirls you on high
And tosses you swirling afar o'er the haze,
'Twixt a wind-swept sea and a sapphire sky?
Flashes of white 'twixt the sea and the sky,
You swoop and you circle,
You vanish and gleam,
And some of that sadness which throbs in your cry
Drifts through my soul like the ghost of a dream.
And my heart's filled with sadness, and why, oh why?
As you circle and swoop 'twixt the sea and the sky!



ROOSEVELT MEMORIAL FOUNTAIN

A Call to the Nature-Lovers of America

The great spirit of Theodore Roosevelt, an inspiration to naturalists, bird-lovers, conservationists and sportsmen, today rests upon the nation like a mighty benediction. Men of the open loved him and the faces about his campfire, whether black or yellow, white or copper, bent their gaze upon him with that respect and affection which men of towering nobility have ever inspired.

He was a scientific collector of birds in his youth and in manhood sought the fiercest animals of the jungle and brought his trophies to museums where the public might look upon them and learn. As President he established the principle of government bird-reservations, and created fifty-one of these national wild-life sanctuaries. He awoke the nation to the need of saving its forests and other natural resources.

He taught and practiced clean, straight sportsmanship with a power that has caused thousands of men afield to walk in straighter paths.

He discussed questions understandingly with our greatest technical naturalists and at the same time was president of the Long Island Bird Club that feeds the wild birds in winter and teaches little children to love them.

The man or woman who is wedded to the open knows these facts and many others. It is because of this knowledge and of a desire to give some tangible expression of esteem in which his memory is held that the plan has been formed to erect at some appropriate spot a memorial that speaks of the wild bird-life in which he was so deeply interested.

The National Association of Audubon Societies and affiliated organizations of various kinds throughout the United States, therefore, call upon the friends of their great fallen leader to erect a *Roosevelt Memorial Fountain*.

The possibilities of such a work of art are boundless and in the hands of some great American sculptor there can be wrought a fountain of such beauty and

appropriateness that it will become one of the landmarks of our country, and ever serve as a reminder of the great American nature-lover.

When the first announcement of this proposition was made, the committee purposely withheld any suggestion as to its location, with a view of learning the wishes of those who contributed to the work. The general sentiment seems to be crystallizing around the idea that it should be located in Washington, D. C., this being the one city which belongs to the whole nation.

It is hoped and confidently expected that every Audubon Society, Bird Club, Conservation Association, Sportsmen's Club, or other organization interested in the conservation of wild life in America will feel a responsibility in contributing and aiding in securing contributions from individuals.

The entire cost of the clerical work in sending out circulars, attending to correspondence and bookkeeping, as well as several thousand dollars to be used in the initial expenditures for circulars, postage, etc., will be borne by the National Association of Audubon Societies and its friends, with a view of keeping the entire fund intact to be used exclusively for the Memorial Fountain. A separate bank account has been opened for this fund and the interest accruing from the deposit will be added to the principal. Thus the Association is 'showing its interest in the Memorial Fountain, which, it desires to be distinctly understood, will be erected by the "lovers of wild life in America," and not by the "Audubon Societies."

The following committee has been formed to aid in the collection of funds and in the ultimate selection of a proper work of art:

National Committee on the Roosevelt Memorial Fountain

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 Ruthven Deane, 112 W. Adams St., Chicago
 William B. Mershon, Saginaw, Mich.
 William Frederic Badè, President California Associated Societies for Conservation of Wild Life, Berkeley, Calif.

The books are now open for subscriptions, and contributions may be sent to Dr. Jonathan Dwight, treasurer, 1974 Broadway, New York City, or to any member of the committee. In addition to the usual receipts, subscriptions, unless otherwise requested, will be published in BIRD-LORE.

The first notice of the action taken to erect a Memorial Fountain for Theodore Roosevelt was given out on January 23, 1919, and the first circular appeals for funds were mailed February 7, 1919.

The following contributions were received between February 10 and March 1, 1919. They are here listed in the order in which they were received, with the exception of those who desired that their names be withheld, or contributions which came in anonymously. These are grouped at the end of the list.

CONTRIBUTIONS TO THE ROOSEVELT MEMORIAL FOUNTAIN

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Names Withheld	565 50
Total	\$6,777 55

Reporting Violations

Members of the Association and others can help in the cause of bird-protection by reporting to this office any violations of the bird and game protective laws that come to their attention. Some members have been doing this for years, and when the evidence presented is of such a character that it would seem a game warden would be able, upon further investigation,

to bring a successful prosecution, these cases are immediately reported to the game commission of the state in which the offenses occur. State game officials are usually prompt in giving attention to matters of this character reported by the Association.

The following letter from Game Protector Thomas H. Allen, of the State of New York, addressed to Inspector Claude Hanlon, is only one of numerous investigations which have been brought about through reports made by members of the Association.

Mr. Allen reported:

"I beg to report to you in regard to the complaint received from Westbury, Long Island, as to the boys killing birds with rifles, and to say that immediately upon receipt of the complaint from the New York office, I went to Westbury on Saturday, December 28, 1918, and patrolled the village. I found one boy with an air-gun and took him home to his mother. Took the gun from him. His mother stated that she would not let him have the gun again. I then went to see Mr. ——. He stated that the boys were shooting birds. I went to see Constable Conner and he told me that he would stop all boys shooting air-guns in the village of Westbury. After that I went to see the principal of the school, but he was out of town during the Christmas holidays. I will reach him by letter and ask him to place this matter before his boys and bring to their attention the seriousness of destroying birds of any kind."

Let Bird-Lovers Be Watchful

Now that the world war is over, the United States is faced with the tremendous task of helping feed the famished countries of Europe in addition to maintaining its own domestic food supply.

The wild birds constitute our greatest natural guardians of the growing crops, many of them daily eating their own weight in insects. Never before has the need for conserving our wild bird-life been so tremendously vital as at this time. It is, therefore, highly important that everyone should be greatly interested in bird-protection, and no opportunity should be lost to encourage the birds to come about the home, and to see that they are protected from all destructive agencies.



THE BIRDS LOVE BERRIES

When you first look out of the window early in the morning you will see the birds getting their breakfast from the berry-bearing shrubs. These same shrubs will also provide lunch and dinner, in fact will yield a perpetual feast.

It is a simple matter for you to surround your garden with berry-bearing shrubs, or plant a copse in some quiet corner. All of these shrubs are distinctly ornamental the year round, and can be used in place of ordinary shrubs that have no attraction after the flowers have faded.

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No. 2. **Japanese Dogwood.** Flowers as conspicuous as our native dogwood.

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No. 4. **Chinese Christmas Berry.** As sparkling as the eyes of the birds they attract.

No. 5. **Japanese Silver Thorn.** The birds and the children are both fond of the berries.

No. 6. **High Bush Cranberry.** Exceedingly showy all winter.

No. 7. **Black Alder.** The birds can see this a good ways off.

No. 8. **Bush Honeysuckle.** Watch the birds feast on them in August.

50 plants (our assortment), 1½ feet high, \$10; 100 plants \$19

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"FLOWERING TREES AND SHRUBS." Another Hicks Monograph for all who love the usual and are interested in the unusual flowering shrubs and trees. Sent free on request

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1. BLUE JAY

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Bird-Lore

A BI-MONTHLY MAGAZINE
DEVOTED TO THE STUDY AND PROTECTION OF BIRDS
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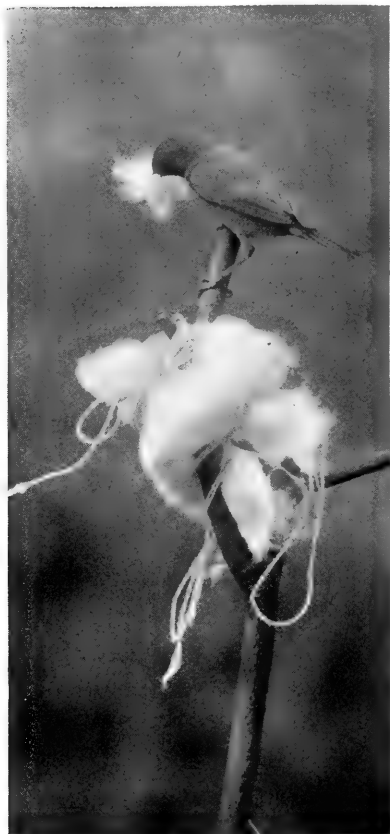
Vol. XXI

MAY—JUNE, 1919

No. 3

The Warblers of Central New York*

By A. A. ALLEN, Ph.D., Assistant Professor of Ornithology, Cornell University
With Photographs by the Author



WOOL- GATHERING

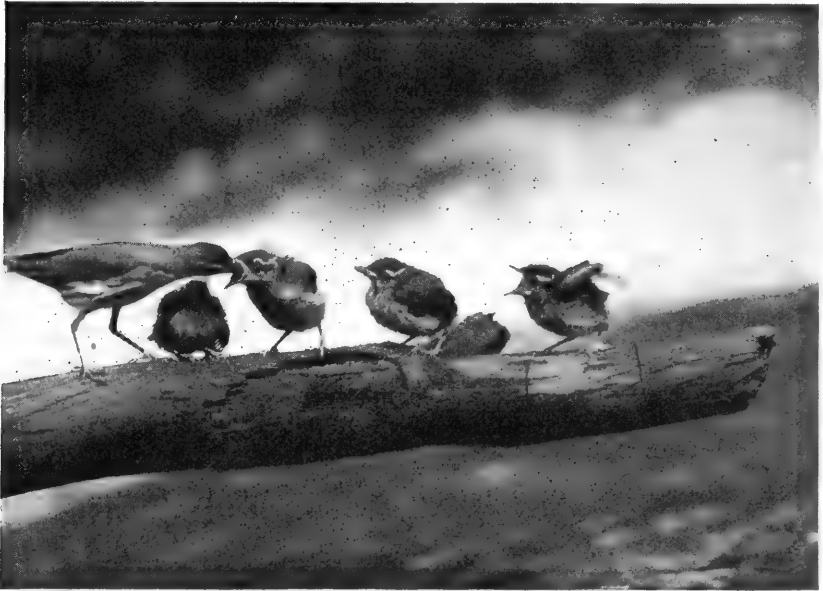
The commonest Warblers of central New York are the Yellow, Redstart, Ovenbird, and Northern Yellow-throat. Here is a Yellow Warbler gathering nesting material.

THERE are thirty-nine species of Warblers that breed in eastern North America. Of course, one could not expect to find all that number nesting in one place for some are characteristic of the south and others of the north. The largest number are found in the intermediate regions, and are about equally divided between the Canadian and Transition life-zones. Here, in central New York, we are located in the Transition Zone, but a few of the typically Austral Warblers work their way this far north and a number of Canadian species remain this far south on the tops of the higher hills and in the deeper ravines. Within the Cayuga Lake basin we have found the nests of twenty-two species, though in the case of one of these, the Prothonotary, the nest was built entirely by the male bird and never occupied, since no female ever appeared.

The commonest and most typical species, in the order of their abundance, are the Yellow, Redstart, Northern Yellow-throat, Ovenbird, Chestnut-sided, Black and White, and Black-

* Concluded from BIRD-LORE for April, 1919.

throated Green Warblers. The Louisiana Water-Thrush, which is typically an Austral bird, is found in every ravine and is perhaps more abundant than the Black-throated Green or the Black and White. It seems strange to find this Austral bird nesting in the same ravines with Blackburnian, Canadian,



THE ORIGINAL CAFETERIA

The Louisiana Water-Thrush is typically an Upper Austral bird, but finds suitable conditions of humidity in all the ravines

and Magnolia Warblers, Winter Wrens, and Juncos. Temperature alone will hardly explain all the problems of distribution.

The other Austral Warblers are the Hooded and Cerulean, which are firmly established in the swampy woods at the north end of Cayuga Lake. Their number in these woods during the summer is so out of proportion to the number seen on the migration at the south end of the lake that it seems probable that they come in from the west or even from the Austral territory that lies to the north, along Lake Ontario. With them are associated a number of Golden-winged Warblers, a species never recorded at the south end of Cayuga Lake, but which regularly migrates up the Seneca Lake basin, 20 miles west. This is a strangely restricted migration route for a bird of such widespread distribution.

The Pine and the Northern Parula Warblers, which are typical of the Transition Zone, are uncommon nesters with us for perhaps another reason. The Pine Warblers favor the pitch pines and the Parulas, the Usnea moss, neither of which is abundant. How the Parula adapts itself to the absence of Usnea, we learned for the first time a year ago by finding a nest composed

entirely of leaf skeletons. The nest was at the edge of a small lake, hung in the tip of a drooping hemlock branch about 25 feet above the water. There was no *Usnea* moss in the vicinity, but the substitute had been quite as skilfully used.

The presence of the *Magnolia* and *Blackburnian* Warblers is determined by extensive growth of hemlocks, either in the ravines or on the tops of the hills above an altitude of 1,500 feet. The *Black-throated Green* is somewhat influenced in the same way, although we have found more nests in the tops of deciduous saplings than in evergreen trees. The nests resemble, in position and structure, those of the *Redstart*, but they are made of different materials and are usually 15 to 30 feet from the ground.

The *Black-throated Blue* is seldom found outside of the deep ravines, except above 1,500 feet, and although it more often nests in low bushes or sprouts from deciduous trees, it frequently chooses the ground hemlock and seems to be partial to woods where it grows.



DOWN WITH THE DESTROYERS OF CROPS

The young *Golden-winged Warbler* in the shade is negotiating a large insect, with the assistance of its mother

The *Nashville Warbler* seems to require the presence of sphagnum moss, and although not abundant in the real sphagnum bogs, it is always found in our deciduous woods where there are little runs and hillocks with occasional patches of sphagnum. They are more common on the tops of the hills but

occur also in woodlands that are typically Transitional, if the proper conditions are found. The nest is usually placed at the base of a bush or an alder growing from the side of one of these hillocks, usually in or near a clump of sphagnum.

The (Northern) Water-Thrush and the Mourning Warbler seem to be influenced more by extreme humidity than by temperature. The damp, low-land woods, where skunk cabbage and nettles thrive, attract the Mourning Warbler and if, added to these, there are numerous pools of standing water,



SUBSTITUTES IN BIRD-LAND

In this nest of the Parula Warbler, leaf skeletons have been substituted for *Usnea* moss, and used quite as skilfully

the Water-Thrush is satisfied to go no farther north. Fallen logs, moss, and royal ferns make it still more attractive for the Water-Thrush. Both the nest of the Mourning Warbler, built up from the ground in a skunk cabbage or a nettle, and that of the Water-Thrush, sunk in the moss at the foot of an alder, are difficult to find.

The Canadian Warbler is another species that seems to enjoy humidity, for although it nests on the relatively dry hilltops, it is more abundant

about the edges of sphagnum bogs, along cool trout-streams, and in the deep ravines.

Even as strange as the association of Louisiana Water-Thrushes with northern Warblers in the ravines is that which occurs in the swampy woodlands at the north end of Cayuga Lake. Here are the standing pools of water and the acres of skunk cabbage that attract large numbers of Mourning Warblers and Water-Thrushes, but with them, because of the open character of the deciduous trees, the undergrowth and the heat of the lowland woods, are numbers of the Austral Cerulean and Hooded Warblers. The typically Transition Redstarts and Yellow Warblers are the most abundant forms, and with them a colony of Goldenwings. Truly, with some birds, humidity and the resulting vegetation are more important than temperature in controlling their distribution.

Temperature and humidity are ordinarily so closely interwoven that it is difficult to determine which is the more important. Extensive forest growth always increases humidity by retarding evaporation and by the actual discharge of moisture from the leaves. This, in turn, modifies the temperature. When all of central New York was covered with forest, much cooler and more humid conditions undoubtedly existed than do today, and the birds that are now confined to the ravines and hill-tops were probably much more widespread. This might have been due to temperature alone. But when, today, we find adjacent woodlands, where temperature conditions are approximately the same, the dry woods supporting purely Transition or even Upper Austral birds, and the swampy woods supporting birds that are common throughout Canadian woodlands, it seems that humidity is the more important factor in controlling their distribution, and that the extensive forest growth and lower temperature of the Canadian woodlands produces the necessary humidity even where there is no standing water.



A HOME IN THE WOODS
A typical nest of the Black-throated Blue Warbler in a beech sprout, with the female incubating

In studying the home-life of the Warblers, one is continually being impressed by the great individual differences in the habits of each species. When one is about ready to make a generalization, for example that the male Yellow-throat never assists in incubation or care of the young, the very next pair that one watches may reverse the tables and the male may do most of the work. In general, however, the cycle seems to me to be as follows: the resident individuals arrive after a certain number of migrating individuals have passed through. The resident males arrive sometime before the migrating females and several days, or even weeks, before the resident females. Each male selects a circumscribed nesting-area where he permits of no intrusion by other males of his species. Here he sings and displays and awaits the



A SWAMP-LOVING FAMILY

The (Northern) Water-Thrush requires extreme humidity, pools of standing water, moss, and ferns

coming of a female that will be susceptible to his charms and that will approve his choice of a nesting-area. Very often it is the same female that accepted him the year before, because the homing instinct is just as strong in her as in the male, and she will ordinarily return to the spot where she nested the year before. If her former mate is still strong enough and aggressive enough to drive off other males, she re-accepts him. Otherwise she accepts, with equal grace, his conqueror. The female selects the actual nesting-site and ordinarily builds the nest, though the male often pretends to help and is occasionally quite assiduous in his assistance. In the case of the Prothonotary Warbler, already mentioned, the male built an entire nest while waiting for a female to put in an appearance.

In the majority of cases the female performs all the duties of incubation,

though there are many individual exceptions, even among such brightly colored males as the Redstart and Black-throated Blue Warblers. When it comes to the care of the young, the males ordinarily share the labors equally with the females, and in the presence of danger are much more courageous or at least less timid in their defense.

Seldom, if ever, do any of the Warblers raise two broods, though they ordinarily persist until they have successfully raised one. Since many of the



FEMALE REDSTART AND NEST

first nests are broken up, even two or three times, Warblers are often found nesting far into July, but I have never discovered any positive second broods.

At the close of the nesting season, the males are the first to molt, but the young often begin their wanderings before the males start on their southward migration, and are, therefore, the first to appear outside their normal range. The first Warblers are heard going over at night, usually the last week in July, when there is, apparently, a movement of Ovenbirds, Water-Thrushes, Black and White, Chestnut-sided, and Yellow Warblers, and Redstarts. About this time the Chats disappear. The cool spell which occurs about the middle

of August brings on hosts of these species and starts the Magnolias, Parulas, Nashvilles, and Black-throated Green Warblers. September ushers in the more northern species, the Canadians, Black-throated Blues and Blackburnians, followed by the Blackpolls, Baybreasts, Myrtles, and Tennessees. In general, the first to migrate are the Transition species, the next the Canadian, and finally the Hudsonian. The Myrtle and Orange-crowned Warblers that have not far to go, delay their leave-taking until October and occasionally even until November. With the disappearance of these, the Warblers are a memory until the first twitter of the Pine and the ringing notes of the Louisiana Water-Thrush in early April announce that spring is well under way.



A SLIM MEAL

The male Canadian Warbler is about to give a crane-fly to its young

Notes from a Traveler in the Tropics

IV. PERU

By FRANK M. CHAPMAN

With illustrations by Louis Agassiz Fuyertes

EXCEPT where occasional small, shallow, snow-fed rivers reach the sea and in the generally adjacent irrigated areas, the coastal region of Peru is almost devoid of vegetation. But this barrenness, this nakedness, as it may well be called, serves but to reveal the infinitely diverse beauties of form, structure, and color of the earth's surface far more clearly than if they were cloaked by a forest. I yield to none in my love of trees; I know the charm of tree-covered hills and mountains, but their attractiveness is from within rather than from without. One revels in this grandeur of trunk and grace of limb, their vistas, their play of sunlight and shadow, the fertility to which they give such noble expression, the life to which they give abode. But from a scenic point of view they have concealed the charms of the earth in which they grow as effectively as one could hide the exquisitely modeled form of a deer by draping it in a sheep's skin.

No one complains of the Grand Cañon because it is treeless, and I have small patience therefore with those writers who describe the coast of Peru as monotonous and lacking in interest because of its aridity, when from the sea to the summit of the Andes there stretches a panorama as varied in feature as it is vast in size.

It is true that fogs and low-hanging clouds at times prevail on this coast, and when they persistently shut out the view of mountain ranges arising to snow-clad peaks they accentuate the impression of desolation which the barrenness of the foreground, seen alone, may produce. But, on the other hand, when they disappear before the heat of the ascending sun or are penetrated by its setting rays, they reveal the weird, impressive world which lies behind them, and create effects of singular and indescribable beauty.

It must be admitted that distance here truly "lends enchantment to the view." Doubtless it may be seen to best advantage, and unquestionably with the greatest comfort, from the deck of a coasting steamer which, sailing from port to port, gives one a frequently changing outlook.

It should be clear, from what has been said above, that western Peru is not fitted to support a large or varied avifauna. In the 'distribution' of bird-life in this part of the world, the sea received by far the larger share. Great stretches of coast are as lacking in birds as they are in plants, and it is only about the rivers and irrigated districts that birds are found in any numbers. Nevertheless, the bird-life of western Peru presents several exceptionally interesting problems which the American Museum is now attacking in the field and about which I hope to have something to say at a later day.

In the preceding paper of this series I have tried to convey, with, I fear, but poor success, some idea of the marvels of sea bird-life of the Peruvian coast. Here I shall write of the wayside birds one sees ashore.

As usual on the Pacific coast, the steamer dropped anchor some distance from shore, and we landed at Callao in one of the fleet of small boats which, like aquatic hacks, crowd about the gangplank, with Cormorants bobbing up and under, here and there, almost until we reached the quay. From the electric train, which takes us rapidly over the eight miles between the port of Callao and Lima, it is probable we shall see fields white with Gulls, attracted, doubtless, by freshly plowed ground, and with them we definitely leave behind us the birds of the sea.

Lima, fortunately, has thus far escaped the House Sparrow pest, and; indeed, is distinguished by having a Swallow (*Atticora cyanoleuca*) as its characteristic, in fact, only street bird. It is a Swallow somewhat smaller than, but resembling in form and color, our Tree Swallow, but with the low-dashing, reckless flight of a Barn Swallow. It darts through the traffic of Lima, skimming the pavement, and surprising you at times by the nearness of its approach. Beyond a superabundance of house-flies, due we may be sure to no desirable cause, I detected no winged insects on which these blue-coated 'police of the air' might feed, and if they confined their activities to capturing these disseminators of disease, they were performing a service which should win them a warm place in the hearts of all Limeños. At dusk a swarm of Nighthawks appeared above the house-tops to carry on in their special field the war on insects which the Swallows waged by day.

One cannot go far in a South American city without finding a park or plaza with, even in desert regions, trees, bushes and plants. And one cannot go far in any plaza in Lima without seeing, and generally hearing, a Sparrow slightly larger than a Song Sparrow, with a white throat bordered by black patches and rufous, and with a slight crest. I know of no distinctive native name for this bird. Andean White-throat it has been called in books, and at one time it was placed in the genus *Zonotrichia*. South American Song Sparrow (*Brachy-spiza capensis*) it has also been called, and since it is not confined to the Andes but is distributed throughout South America, where it takes much the same place that the Song Sparrow does with us, it may perhaps be well called White-throated Song Sparrow.

The bird is so abundant, sings so freely and so large a part of the year, that no ornithologist can have much field experience in those portions of South America in which it is found without establishing many associations with it. Each time I return to South America, I anticipate meeting this Sparrow with the same pleasure that one looks forward to seeing a friend with whom one has much in common, and the first note of its song opens the door to a host of half-forgotten scenes and memories.

Like many effective bird-songs, it is very simple: three long-drawn, sweet,

singularly tender, appealing whistles form its theme, and they are sometimes followed by a short trill or twitter. It strongly suggests in tone and form the song of the White-crowned Sparrow, and one need only be familiar with the notes of that bird to find an immediate place in his affections for its distant South American relative.

The resemblance is so close that, after years of association, the song of the more southern bird still awakens recollections of a camp in the Sierras, near Lake Tahoe, where the plaintive notes of the White-crown were among the most frequently heard bird-voices.

We reached Lima in mid-November, as spring was passing into summer, and never, it seems to me, have I heard the White-throat sing more sweetly.

Another half-familiar and common bird-song is that of the House Wren. It is clearly different from that of our bird and still sufficiently like it to awaken at once a suspicion of its author's identity. In spite of its small size, the House Wren is doubtless the most widely distributed of American birds. Few favorable localities (except in the West Indies) from Tierra del Fuego to Canada are without it, and everywhere it shows an evident fondness for our society and proclaims its presence by voice and manners. In ornithological works it appears under



WHITE-THROATED SONG SPARROW

a variety of scientific names; but this, to paraphrase Thoreau, is one of the instances where, if names were invented to conceal facts, zoölogical nomenclature is a great improvement on a bad invention! Within certain rather narrow limits it varies locally in color and size, and many well-marked geographical races may be recognized in its surprisingly extended range; but they should not let us lose sight of the fact that whether we call them species or subspecies, they are all representatives of the House Wren.

In the larger parks and gardens there were Ground Doves and numbers of large Pigeons, whose sonorous calls echoed through the groves of eucalyptus and araucaria. The attractive zoölogical garden contains but a meager representation of Peru's rich avifauna, and a self-invited group of Anis, which were constructing a large nest in a small tree bordering one of the walks, formed a more interesting ornithological exhibit than any the directors had provided.

The Rimac River, on which Lima is situated, runs throughout the year and

supplies water for the irrigation of a comparatively large area. This is almost wholly under cultivation in cotton, sugar-cane, and alfalfa, but there are stretches of bottom-lands and river-margins, subject to overflow, unfit for agriculture, where wild cane and the scrubby bushes which apparently belong to the natural flora of the region, still flourish. I hope in time to obtain data which will show the effects of irrigation on the distribution of bird-life in this and similar oases of western Peru, but the only observations I could make on this occasion were passing glimpses from an automobile or car-window of Sparrow Hawks, Red-breasted Troupials, Mockingbirds, Anis, several species of Doves (*Chamepelia*, *Zenaida*, *Columba*), Sparrows (*Brachyspiza*, *Volatinia*, *Sicalis*), and Vermilion Flycatchers. The latter bird is found here in two forms, one of which is the normal brown above with the crown and underparts vermilion, while the other is uniform dark sooty brown with, at times, a red feather or two. The question whether the two breed together or represent distinct 'species' presents an inviting problem in dichromatism or mutation which remains to be solved.

December 4, I sailed from Lima for Mollendo, Peru's most southern port, arriving there December 7. The coast here is extremely rugged, with outlying rocky islands tenanted by seals and Cormorants.

Following a phenomenal rainfall of seventy-six hours' duration, a surprising growth of flowering plants appeared on the usually barren coastal plains. I counted some twenty species in an hour's walk, most of them abundant and blooming profusely. Every spring (November) a luxuriant growth of flowering plants covers the slopes of the mountains at an altitude of from 2,000 to 3,000 feet, where the coastal clouds supply them with moisture; but this, it was said, was the first time in forty years that such a growth had reached the margins of the sea. Several species had already matured their seeds, which may lie in the dust of the desert for forty more years before they germinate.

Birds have no such means of biding a favorable time, and the conditions which made millions of plants appear where none had been before seemed to have exerted no influence on their numbers. I saw but four Finches during my morning walk, but, doubtless, in the course of time, they will harvest their share of the unwonted crop of seeds.

Even from the sea the slopes of the usually brown coast range appeared distinctly green, and as we climbed upward on the railroad to Arequipa, the plant-growth increased in luxuriance, until at 2,800 feet it was as rank as it is in the United States in August and September. There were masses of color, with yellow predominating—all strange and unknown flowers, except one, the heliotrope, which grew in large bushes at the sides of the track.

Here White-throats, Swallows, and Doves were common, and a single Condor soared overhead, doubtless tempted from his Andean heights by some dead cow or burro.

At 3,000 feet the range, against which the coastal clouds mass themselves,

ends abruptly and is succeeded by a flat desert so absolutely devoid of life that the slow-moving sand crescents, which by hundreds cluster on its eastern half, seem its only animate forms.

Beyond this plain the way lies through a fiercely arid range, with reddish rocks sculptured by sand-blasts into weird, fantastic shapes. Far below, the Chile River winds through a ribbon of green which, gradually widening, becomes the beautiful valley of Arequipa.

My home in Arequipa was in a garden where White-throats sang throughout the day; House-Wrens trilled musically; and for two days two Black-headed Goldfinches sang a duel for the possession of a mate who, on the third day, was seen carrying nesting material into the upper branches of a large cypress. A pair of small Doves had selected the same tree for a nest-site, and their curious little grunting notes came from the heart of it. There was a small Flycatcher (*Ornithion*) with an abrupt, exclamatory call, a Warbler (*Dacnis*), and two species of Hummingbirds, while hundreds of the same species of Swallow seen in Lima gave life to the air.

After a short stay at Arequipa, the journey to the tableland was continued. The railway at once leaves the irrigated district, with its fields of rye, barley, corn, and alfalfa, bounded by fig trees and willows, to climb the slopes of Cha-Chani, dotted with a species of organ-pipe-like cactus which continues to an altitude of about 9,500 feet.

At about 11,000 feet, the bunch-grass which characterizes the tableland or puna of Peru, affording pasture to its millions of sheep, llamas, and alpacas, appears. The slopes soon give way to level stretches, with marshes, streams, and lakes, and we now enter a region of surprising interest to the ornithologist, for these apparently desolate heights, lying between twelve and thirteen thousand feet above the sea, support a wealth of bird-life.

We may see a Puna Flicker, or even a troop of twenty or thirty of them go bounding over the puna, and we will recognize them at once by their white rump and characteristic flight, but the smaller land-birds are not to be seen from the window of a moving train. We shall not, however, go far after reaching the tableland without passing some marshy, boggy spot (there is one just before reaching Crucero Alto at an altitude of 14,688 feet) where we shall be surprised by seeing what is apparently a flock of tame Geese. Some of them may stand and watch us pass at a distance of not more than forty yards, and it is only when others take wing that we realize that they are in truth wild Geese. Then we may discover less conspicuous species near them—Ducks of several kinds, Coots, Herons and Ibises, the last two very closely resembling and obviously representing our North American Black-crowned Night Heron and Glossy Ibis respectively.

A few miles beyond Crucero, the track runs between two beautiful lakes. On July 1, 1916, in the heart of a Peruvian winter, when first I saw them, snow extended down the mountain slopes to their margins, but it was now midsum-

mer (December 15) and although there were patches of snow along the track at Crucero Alto, only the summits of the mountains about the lakes were snow-covered.

From the train one sees small groups of Ducks and scattered Coots on the lakes, and a pearl-backed, white-winged Gull, known only from the high Andes, seems far more at home over these bodies of water than when seen in the puna marshes or following the course of a roaring mountain stream through a narrow, high-walled cañon.

But the supreme and surprising experience for the ornithologist in these bleak heights is the sight of a flock of Flamingoes. To find these birds, which we are accustomed to associate with tropical surroundings, in this cold temperate zone, feeding in lagoons where, in the winter, ice forms frequently, and snow falls not rarely, is one of the anomalies of bird distribution. From Lake Junin, in central Peru, southward to at least central Chile, Flamingoes are permanent residents of the lakes and lagoons of the high Andes. They are found also on the pampas of northwestern Argentina, and southward into Patagonia. No Flamingoes are known between Peru and the southern borders of the Caribbean Sea, and the problem of their distribution calls for an explanation of their presence south of the Equator as well as for their existence almost up to the limits of perpetual snow.

It is far too complicated a question to be discussed during the course of this informal narrative, but it may at least be said that there is much evidence in favor of the theory that the Flamingoes, with some other forms of life inhabiting these Andean lakes, have risen from sea-level to their present high altitude, through that elevation of the earth's surface in which the Andes have their origin. In 1916, I saw Flamingoes from the train in one of the lakes mentioned above, on the tableland north of Juliaca, and we found them also at a small lake east of Tirapata.

The Herons, Ibises, and Geese are surprisingly tame and are often seen about the outskirts of villages, but the Flamingoes, although they apparently are not pursued by man, show a lack of confidence in him which induces them to take flight long before one comes within gunshot. No one seemed to know when or where the Flamingoes nested, but it should not be difficult to find their breeding-grounds.

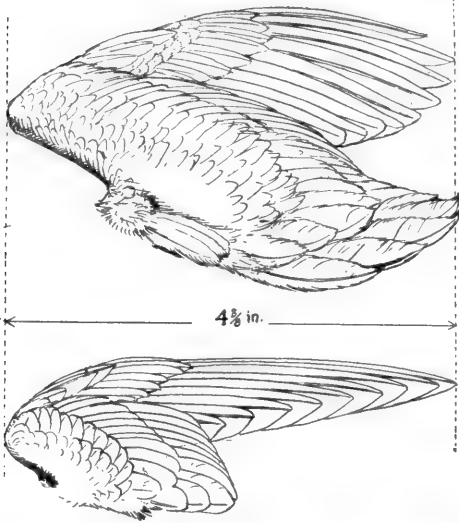
The voyage across Lake Titicaca is designed to speed the traveler on his way rather than to give him an opportunity to see this beautiful body of water, with its Inca-terraced islands, its pastoral shores and, toward the east, stupendous wall of snow-covered mountains. The through steamer leaves Puno at nightfall, on the arrival of the train from Arequipa, and reaches Guaqui on the Bolivian side of the lake the following morning at 7 o'clock. A smaller steamer, which delivers freight at the small Indian villages on the lake, takes three days for the same trip. Only native passengers are expected to patronize this boat, and the food is designed to meet their tastes rather than those



This Grebe (*Centropelma micropterygium*) furnishes an admirable lesson in the effects of disuse, for, since its arrival in the remote past on Titicaca, it has had so little use for its wings in the air that it has lost the power of flight. It is a fairly large bird, about the size of our Holboell's Grebe, but its wings, presumably through disuse as organs of flight, have become too small to raise it in the air. They are actually no longer than those of the small blue-backed Swallows which skim lightly over its head.

of foreigners, but the slight discomforts of the journey are more than offset by the glimpses it affords of Titicacan life, both human and feathered.

The myriads of water-birds which inhabit the lake congregate chiefly in the shallow bays where there is a dense growth of the reeds from which the natives make their canoe-like balsas. These places are, unfortunately, not visited by the steamer; nevertheless, birds are constantly in sight in varying numbers, both along the shores of the lake and in open water. There were Ducks (chiefly Pintails), Coots, Gulls, Cormorants and Grebes of several species. One of the latter (*Centropelma micropteron*) furnishes an admirable lesson in



WING OF THE FLIGHTLESS GREBE, COMPARED WITH THAT OF A SWALLOW (*Atticora*)

the effects of disuse, for since its arrival, in the remote past, on Titicaca it has had so little use for its wings in the air that it has lost the power of flight. It is a fairly large bird, about the size of our Holboell's Grebe, but its wings, presumably through disuse as organs of flight, have become too small to raise it in the air. They are actually no longer than those of the small blue-backed Swallows which skim lightly over its head. Possibly these small wings may make more effective paddles under water than would longer ones, but the bird's best efforts on the surface bring it only to a half-sitting position when, with the aid of its

feet and a flapping of its stubby wings, it progresses with surprising rapidity, leaving a broad wake and creating a rushing sound, which, on still days, may be heard for some distance.

I landed one morning while we were discharging freight, which was being transferred to the backs of llamas, burros, and men, and in the patches of purple lupine and the scrubby growth at the foot of a protecting bluff, found numbers of land-birds. There were the omnipresent and always welcome White-throat and House Wren, a large sooty Robin-like Thrush, Swallows, and dipper-like *Cinclodes*. Only the White-throat and Wren were heard to sing. Indeed, without them the traveler on the treeless shores, slopes, and plateaus of Peru would rarely be cheered by the songs of birds.

After anchoring off the long stone causeways which formed the ports of four villages on the west shores of the lake, we left Copacabana on the afternoon of December 17, and the following morning we arrived at Guaqui and took the train for La Paz.

Purple Finches

By MRS. HERMAN F. STRAW, Manchester, N. H.

I WONDER if some of the readers of BIRD-LORE might not be interested in my experience with Purple Finches!

For several years I have had shelves for birds outside my upper sitting-room windows and have kept on them different kinds of seeds, also fruit, crumbs, suet, whatever I have had reason to think might possibly attract birds of any kind. I have had for visitors at various times, White-bellied Nuthatches, Chickadees, one Downy Woodpecker, Myrtle Warblers, Black and White Warblers, and Summer Yellow-birds, but this year there have been only Finches.

Last April, as I came into this room one morning, I saw what seemed to be a red bird, with wings and tail outspread, trying to get a footing on the outside of the window-pane. (Possibly my Canary, hanging in his cage on the inside, may have attracted him.) I stood perfectly still for a minute or two to assure myself as to what the bird was, and found it to be a Purple Finch, a gorgeous male! Then I quickly went to get some seed, as there happened to be very little on the shelf, and my bird had flown when I came back, I feared, for good, but I put out the seed—sunflower, rape, hemp, and canary, and watched. To my great delight he was back again within half an hour and surely found something to his liking, for he ate greedily several times during the day.

The next morning he brought two females with him, and in less than a week there were two males and several brown companions here many times each day. Then, suddenly, they disappeared, and I thought I should see them no more, but about four weeks later a female made her appearance, bringing a young bird with her. Then, the next day, came the male, and here on the shelf, while I sat at the window knitting, the little one was fed by the parents, day after day. They did not have this feeding-place to themselves long, however, for more were with them soon, and then, more still—several males and many females—until now, August 26, there must be thirty Finches, surely, frequenting this shelf, for I have counted twenty-three eating at one time.

Many little ones have been "brought up," sometimes the mother taking them in hand, sometimes the father helping out. This feeding is done by regurgitation, and the process is most interesting. The baby droops its wings, cocks its tail over the back as far as possible, raises its tiny crest, hops after first one parent and then the other, crying and coaxing plaintively, with its mouth wide open. Finally, one of the parents gives it three or four mouthfuls from its own crop, gulping up the food with apparent ease. The little one seems saved the trouble of swallowing, for its mouth is open all the time, and the parent's beak is thrust down the baby throat as far as possible, time after time, in quick succession.

Some males now moulting have brilliant color in patches; some have pink on the breast; others rose-red heads; one is mottled in rose, brown, and gray; another has a blood-red (almost purple) head and neck; another has pin-feathers all over the head and bright rose just above the tail. All are getting a little more perceptibly mature each day, and if they stay I shall have a wonderful exhibition of males as "purple" as they ever are, I expect.

This mixture of red of various tints among the brown females, when the sun shines full upon them all, is something extremely beautiful. Speaking of sunshine makes me think of one other thing to write about. One day I noticed one of the birds squatting on the shelf, tail and one wing spread out to the fullest extent, one leg stretched as far as possible to one side, its neck turned so far around that the head seemed upside down, mouth open, and feathers fluffed out all over the body. Such a strange position! I felt sure this Finch was dying, and feared I had given it something that had poisoned it, for in my great desire to keep these Finches here I had put out fruit (which they do not eat), crumbs of cake, crackers, etc. Consequently I was much relieved when another Finch, flying to the shelf just at this time, pecked the first bird, instantly restoring him to life and flight. Since then I have often seen seven or eight birds at the same time, in as many ungainly and ludicrous positions, "sunning" themselves in the bright, hot sunshine. It surely is a laughable sight, and they do look as if they were "passing away" in good earnest, but if anything disturbs them they are alive and alert in an instant.

Just one other incident. A male alighted on the edge of the shelf one morning; he was all by himself. After eating for a few moments, he gave a little call, sweet and low and plaintive, then another and another, each time a little louder than before. Then I heard an answer from a tree nearby, and, after numerous repetitions, he began to sing. Such a joyous, bubbling-over song! The notes fairly tumbled over each other, they came so fast, and before this musical treat was quite over, a modest brown lady stood beside him. The male went quite close to her, twittering and chirping and talking, then he spread his beauty before her, hopping off a little way, then coming back, strutting and bowing in a most comical way, all the time with wings out and tail up, showing that beautiful rose-colored body and the brilliant crest on his head. The lady looked on admiringly, showing her approval by putting her head round on one side and then on the other and making little soft sounds until he must have understood that she was ready to give him her "hand and her heart," for again came that happy, exuberant, melodious singing, and they flew away together.

These birds have been a constant source of delight to me and to my friends, and I wish I might share it with all bird-lovers! Has anyone else ever had a like experience? I might add that my home is in the midst of a city of 80,000 inhabitants, but stands by itself, surrounded by three or four acres of land and many trees of various kinds.



OLIVE-BACKED THRUSH AT NEST

Two Thrushes

By THOMAS A. TAPER, Lake Linden, Mich.

With Photographs by the Author

THE summer is the time of the year when the lover of nature hears and heeds the call of the Thrush, and nowhere else is that call more inviting than in the woods of birch, maple, and conifer of the Keweenaw Peninsula in northern Michigan. The word forest suggests delightful shade, acquaintance with multitudinous sights and sounds, an opportunity to fall in tune with nature's moods, and, moreover, some leisure to philosophize. As one passes by the last farmhouse one hears the enthusiastic gushing song of the little House Wren; as one enters either by sylvan path or woodland road, one is at once refreshed by the cool air and delicate fragrance, and finds an inviting log on which to sit and rest awhile. A group of barefooted boys now approaches; their countenances are aglow; they are returning from a morning inspection of their traps. One of the boys has a box in which there is a live red squirrel, destined to become a house-pet; all of the others have deadly missiles in the form of stones for 'slingshots.' So here is an opportunity for a friendly warning to the boys not to kill the feathered songsters. There is a better way to hunt birds, and that is with the camera. The walk in the woods is continued and the desired spot is reached—the nest of the Olive-backed Thrush.

The nest of this Thrush was built in a birch sapling which was growing on the side of a wide ravine, and it was fairly well shaded from the sun. It was constructed with twigs and birch bark and was lined with small roots and dead grass. It contained two young birds about four days old. The camera was placed about 28 inches from the nest. A fishline was attached to the

shutter release and led to a place behind a tree, about 25 feet from the nest. I then sat down behind the tree and waited. It was not long before I had my first picture. The stop used was $f/6.3$, and the exposure was one-fifth of a second. I took three pictures, all with the same stop and the same exposure.

The second nest studied was that of the Hermit Thrush. This bird builds its nest on the ground and usually lays four greenish blue eggs which are unspotted. The nest, in this instance, was placed in a bare hummock in the 'forest primeval.' It had birch bark on the outside and was lined on the inside with thread-like roots and some dead grass. Two or three undersized ferns protected it from the sun. In the nest there were three eggs of the characteristic color. A picture of the nest was taken with the use of the portrait-lens. The stop used was $f/32$, and the exposure twenty seconds.

One afternoon, about a week later, I visited the nest again. In it there were three young Thrushes about two days old. The afternoon was cloudy and was not suited for bird-photography in the deep forest, but I set the camera about 28 inches from the nest, so that the birds would become accustomed to it. The birds did not seem to mind the camera at all. I took two pictures, but they were underexposed. The following day was windy, with clouds and sunshine in the morning; in the afternoon the sky was a perfect blue. The birds had become thoroughly acquainted with the camera, and the mother bird even permitted the operator to be in full view at times while she fed her young. However, the bird approached the nest with caution. On the return from a food-quest, it would first land on the horizontal branch of a hemlock sapling, then fly to a log, then to a low stub, and finally come to the nest. It had the habit of stopping and looking whenever it detected a slight movement of the cord. While the bird was in this attitude, the picture was taken.



HERMIT THRUSH AT NEST

The young were fed and the nest cleaned several times during the day, the excreta being carried several feet away from the nest. In one instance I observed that the mother bird devoured the excrement. The duty of nest-inspection was performed with great promptness. After the nest was inspected,



HERMIT THRUSH AT NEST

the bird would fly to a favorite tree, and from here it would go somewhere else in the forest. Sometimes the male bird would give the female a dainty morsel, and she, in turn, would carry it to the nest for the young, while he kept guard at a safe distance.

On the third day of the observations, the young were fed more frequently, and, consequently, they gave evidence of much growth. They had their eyes about half open and moved about the nest considerably.

The intervals between feedings were not without incident. It was interesting to observe the creeping of sunlight and shadow over the nest, the intense radiant energy from the sun reduced somewhat by the canopy of green. Only for a half-hour was the nest fully exposed. It was at this time that the mother bird brooded over the young. A herd of cows, which were grazing on maple seedlings and thin grass, approached dangerously near the nest, and it became the duty of the observer to direct the movements of one or two members of the herd. Some red squirrels ran along logs and on the forest floor, giving evidence of the precarious position of the young birds in the nest. During the morning and afternoon a Red-eyed Vireo charmed the observer with several instalments of his cheerful warble. This song was not so incessant this day as it usually is, for I suspect that he, too, was busy with household cares. The harmony of the forest was broken at times by the harsh cry of the black Crow, that villain who has figured in more than one bird tragedy.

On the fifth day I again visited the nest, but it was empty. Let us hope that the parent birds had witnessed a successful departure of their young.

The Migration of North American Birds

SECOND SERIES

X. BLUE JAY, STELLER'S JAY, AND GREEN JAY

Compiled by Harry C. Oberholser, Chiefly from Data in the Biological Survey

BLUE JAY

The common and well-known Blue Jay (*Cyanocitta cristata*) of eastern North America is, as a species, permanently resident, except along the northernmost border of its range. It comprises two subspecies, the ranges of which are as follows:

The **Northern Blue Jay** (*Cyanocitta cristata cristata*) breeds in eastern North America, north to Newfoundland, central Quebec, northern Ontario, and northern Alberta; west to central Alberta, eastern North Dakota, central Nebraska and eastern Colorado; south to central Texas, Missouri, central Illinois, and North Carolina; and east to eastern Virginia, the coast of New England and of Nova Scotia. It is of casual occurrence in northern New Mexico (Fruitland, Oct. 17, 1908).

The **Florida Blue Jay** (*Cyanocitta cristata florincola*) is resident in the southeastern United States, north to South Carolina, Alabama, southern Illinois and northeastern Texas; west to eastern Texas; south to the Gulf coast of Louisiana and Alabama, and to southern Florida; and east to eastern Florida and eastern South Carolina.

The few migration records in the following table all refer to the Northern Blue Jay:

SPRING MIGRATION

LOCALITY	Number of years' record	Average date of spring arrival	Earliest date of spring arrival
Montreal, Quebec.....	3	May 1	March 22, 1890 (rare in winter)
Ottawa, Ontario.....	5	February 9	January 5, 1909
Mouth of Little Red River, Alberta..			May 15, 1901
Mingan, Quebec.....			June 20, 1909

FALL MIGRATION

LOCALITY	Number of years' record	Average date of last one observed	Latest date of last one observed
Montreal, Quebec.....	3	November 2	November 25, 1856
Ottawa, Ontario.....			December 1, 1885

STELLER'S JAY

The range of the Steller's Jay (*Cyanocitta stelleri*) extends from Alaska through western North America to the highlands of Honduras. This bird is practically everywhere resident, such movements as occur being in the nature of wander-

ing or of descent from the mountains into the valleys during the winter season. Six subspecies of this Jay inhabit North America, and two others occur in central and southern Mexico and Central America. The geographic distribution of the North American forms is given below:

The **Steller's Jay** (*Cyanocitta stelleri stelleri*) occupies the Pacific Coast district, north to Cook Inlet, Alaska, south to northwestern Oregon, and east to western British Columbia and western Washington. Its range includes the islands off the coast of southern Alaska and British Columbia, excepting Prince of Wales Island and the Queen Charlotte group.

The **Queen Charlotte Jay** (*Cyanocitta stelleri carlottæ*) is resident in the Queen Charlotte Islands, British Columbia, and Prince of Wales Island, Alaska.

The **Coast Jay** (*Cyanocitta stelleri carbonacea*) is resident in the Pacific Coast district, north to central Oregon, south to Monterey County, California, and east to the California coast ranges and the Siskiyou and Cascade Mountains.

The **Blue-fronted Jay** (*Cyanocitta stelleri frontalis*) occupies the mountains of California, north to the northern part of the state; west to the eastern coast ranges as far south as San Luis Obispo County, also west to Ventura County and the southwestern corner of the state; south to northern Lower California; and east to eastern California and west central Nevada.

The **Long-crested Jay** (*Cyanocitta stelleri diademata*) is resident in the Rocky Mountain region of the southwestern United States and in the Sierra Madre of northern Mexico, north to northern Colorado and northeastern Utah; west to southwestern Utah, western Arizona, eastern Sonora, eastern Sinaloa, and Tepic; south to northern Jalisco and Zacatecas; east to Zacatecas, central western Texas, and eastern New Mexico.

The **Black-headed Jay** (*Cyanocitta stelleri annectens*) occupies the mountains of southwestern Canada and the Rocky Mountain region of the northwestern United States, north to southwestern Alberta and southeastern British Columbia; west to eastern Washington and central Oregon; south to southeastern Oregon, northern Utah, and southern Wyoming; and east to northwestern Nebraska, western South Dakota, and central Montana.

GREEN JAY

The gayly colored Green Jay (*Xanthoura luxuosa glaucescens*) is the only form of its species occurring in the United States, although there are several other races in Mexico and Central America. The geographic distribution of the Green Jay extends from northern Tamaulipas and Nuevo Leon in northeastern Mexico, north to the valley of the lower Rio Grande in central southern Texas. It is permanently resident in most, if not all, of its United States range.

Notes on the Plumage of North American Birds

FIFTY-FOURTH PAPER

By FRANK M. CHAPMAN

(See Frontispiece)

Northern Blue Jay (*Cyanocitta cristata cristata*, Fig. 1).—The brightly colored Blue Jay, Steller's Jay, and Green Jay show their relationship to the somber Crows and Ravens in undergoing very slight plumage changes. Essentially the same 'uniform' is worn at all seasons by both sexes and all ages. The head and body plumage only of the young is more or less dull compared to that of their parents until, by a postjuvenile molt of the body plumage, they pass into a first winter plumage like that of the adult, from which they are henceforth indistinguishable. The juvenile Blue Jay has the crest shorter than the adult, blue of head and back less bright, wing-coverts only indistinctly barred, and black mark across the forehead indistinct.

Steller's Jay (*Cyanocitta stelleri*, Fig. 2).—The young of the Blue-fronted race of Steller's Jay (*Cyanocitta stelleri frontalis*) will stand for the various races of that species. It lacks all blue in the head and body plumage except a tinge on the side of the rump. Its crest is less full than that of the adult, crown and back somewhat browner, throat with streaks only faintly indicated, breast dark sooty gray, passing to dark ashy gray on belly and rump.

Green Jay (*Xanthoura luxuosa glaucescens*, Fig. 3).—The juvenile Green Jay has the blue of the head paler and more greenish than the adult, black of the head and breast duller. Its underparts are pale grayish yellow only faintly tinged with green on the breast.



Notes from Field and Study

Unusual Breeding-Site of Killdeer Plover

The Killdeer Plover has always been a rare bird in the Cambridge region. There are only a few records of its breeding within that area (Cf. Brewster, 1906, Mem. Nuttall Ornith. Club 4, 168). It was, therefore, of some interest to find a pair breeding last summer in a plowed field bordering on Soldier's Field, very near where another pair bred in 1903 (Cf. Brewster loc. cit.).

The chief point of interest, however, was not the reappearance of the Killdeer in the Cambridge region but of its apparent indifference to its surroundings, then greatly altered to meet war conditions. Several times a week, throughout the summer months, the greater part of the 4,500 men in training at the Harvard Radio School paraded on Soldier's Field. They were generally accompanied by one or two bands and one or two bugle corps. While the several battalions of sailors would occupy the main drill-grounds, the naval cadets of the Officer Material School, and sometimes the students in the R.O.T.C., would carry out maneuvers on the surrounding fields, and at least one day on the very field where this pair of Killdeers were breeding. The first time I observed the birds was during the last week in June. The pair flew out from the plowed field over the heads of an advancing battalion of cadets. After uttering a few plaintive *kil-dee's*, they alighted only a hundred yards from the column and stood motionless. When the battalion drew somewhat nearer, they arose again and flew to another corner of the field. I saw the pair many times throughout July, and they always showed this same indifference to the presence of large masses of men or to the loud-sounding bands which accompanied them.

There is a series of tennis-courts along one side of Soldier's Field. These are protected by a wire fence. When repeatedly flushed from the field, the Killdeers would

at length scale down gracefully to the courts, and, after running a short distance, stand motionless in their characteristic way.

Various military duties prevented me from ever searching for the nest which these birds apparently tended in the old plowed field. But in the second week in August, when a change of routine again brought me to Soldier's Field, I was much interested to find four Killdeers in the usual corner. These birds allowed me to approach to about 50 yards, and at that distance it was possible to observe, even without glasses, that two of the group were youngish birds. For more than a week the birds were in the vicinity, and would always fly out at the approach of our battalion. Then came another break in my visits, and when I again returned to the field in early September, the birds had disappeared.

From these random observations it seems certain that the pair of Killdeers successfully raised a brood of two young on the edge of a much-used drill-ground. It is possible that this was not their first brood, for the dates of the appearance of the young is much later than that given by other observers. It is impossible to say whether or not there was an earlier set of eggs, but at least it was obvious that the birds were very devoted to their nesting-site in spite of much noise and confusion.—G. K. NOBLE, *New York City*.

Notes on Nesting Bluebirds and House Wrens

Every year a pair of Bluebirds builds in our garden. There are two houses just alike, and about 10 or 12 feet apart, one facing south and one east. This year, when the birds arrived, they chose the one with the southern exposure. The nest was soon completed, and the female began sitting.

Some time later I noticed that the birds were carrying grass and things into the

other house. I went out to investigate and found five eggs in the first nest. There had been a week of cool weather, and we thought perhaps the eggs had been chilled. I cleaned out the house and waited. Again five eggs were laid and the incubating process begun, and again the female refused to stay in her nest. Her mate would try to coax her back, and he even fluttered about and beat her with his wings—she would go back for a moment, but not to stay.

In a few days they were back at the first house and another nest was completed. This time it was carelessly put together. They then built a still poorer nest at the second house, which I had cleaned out, and then both birds disappeared. The next week a pair of Bluebirds began a nest in house No. 1, and the family was raised with success. I often wondered if it was the same pair, or if Mr. Bluebird at last succeeded in getting a wife who was a home-lover. He certainly deserved one.

The other observation was made with Wrens and is even more unusual, or at least we thought it was.

Early in the summer two Wrens looked over the houses at their disposal and at last selected the one on our front porch. The nest was built and the eggs laid, or so we thought, for the male soon began feeding his mate.

A few weeks later we noted that another Wren was carrying sticks into a house in the flower-garden. She seemed to do most of the work, although her mate would come and sit on the clothes-line and warble his approval. Soon she was snugly settled, and then we discovered we had a real romance on our hands, for her mate was also the mate of the bird in the front porch, or, in other words, he was a bigamist.

Of course now we watched with even keener interest than before, for by the time mate No. 2 was comfortably settled, mate No. 1 was able to forage for herself and family. He also helped to feed the little birds, but he never neglected to bring choice morsels to Madame Wren in the garden.

By the time No. 2's eggs were hatched, brood No. 1 had flown, and he could care

for his second family with ease and comfort.—KATHLEEN M. HEMPEL, *Elkader, Iowa.*

A Parakeet in a City Park

Nothing could be more pleasing to the eye than the sight of the distinguished officers of the Allies in their handsome uniforms as they go about the streets of our city. The drab-clad civilian notes them from the corner of an envious eye, and the small boys gaze with frank and unqualified admiration.

I noticed much the same effect among the birds in Central Park one afternoon in October. I was coming along the path around the Reservoir above 85th Street when my eye was caught by a large flock of dingy English Sparrows that were feeding in the grass by the bridle-path. As my eye roved from the outskirts of the flock toward its center I became aware of some cause of commotion and special interest. The birds were craning their necks, chirping loudly, and jostling one another in their effort to stand all in the same place. In another moment I had discovered the cause. Shining with the brightness of a patch of sunlight on the green grass, and politely oblivious of the vulgar peering crowd about him, sat a little Parakeet busily engaged in feeding on the grass seeds. He showed little fear as I approached, and finally flew to a small tree a few paces away, from which he watched a moment or two and then returned to the grass. The distinguished stranger was about the size of a White-throated Sparrow in body, but of course his tail was much longer. On his forehead he bore a clear yellow mark. His head, throat, breast, underparts, and rump were bright bluish green. His upperparts were distinctly yellowish green, while the wing-coverts were blackish, each feather being delicately fringed with pale yellow or whitish. The tail feathers, as the bird spread them in alighting, showed a fringe at the outer ends of yellowish green and whitish.

Such a sight always fills the observer with strange thoughts of other lands and

times. Perhaps some will be reminded of the day when Carolina Parakeets were casual visitors even in New York State.

I suppose the little Parakeet was an escaped cage-bird, or, possibly, one that is allowed to fly at large to return at night to his cage. Anyway, I have not seen him since, and often wonder what became of him. But nothing can blot out the picture of the graceful, brilliant stranger so superior to the vulgar curiosity of the dingy Sparrows.—TERTIUS VAN DYKE, *New York City*.

Helping Barn and Cliff Swallows to Nest

For several years the writer has spent the summer on the shore of a lake in the Adirondacks, where there seem to be great attractions for birds of the Swallow family, as Barn, Cliff, Bank, and Tree Swallows all nest there in considerable numbers.

The Barn and Cliff Swallows nest side by side on exteriors of buildings, frequently using the remains of old nests as foundations for those of the following year. The Cliff Swallows build on old nests of Barn Swallows, and vice versa. The nesting habits of the two kinds seem to be similar, except as to shape of nests and materials of construction, the Cliff Swallows building the typical retort-shaped nests and not using the grasses, feathers, etc., which the Barn Swallows use for linings.

After careful observation, it would seem that neither kind has a dislike for painted surfaces on which to build nests, but that they are unable to securely attach nests to painted perpendicular surfaces, when the paint has been put on within one or two years. When paint has been on a considerable time they are able to build nests on it securely, and frequently do so.

They are very persistent in trying to build on a selected spot and will make repeated efforts to do so, starting immediately to rebuild when partially completed nests have broken off and fallen to the ground.

Last summer a pair of Barn Swallows

succeeded in building on painted surfaces in a corner between two wings of a building, where the efforts of both Barn and Cliff Swallows had been unsuccessful in several previous years, though numerous attempts at different times had been made to build there, as the corner seemed to possess peculiar attractions. The only explanation that suggests itself for the success last summer is that, in course of time, some change had taken place in condition of the painted surfaces.

In early summer the immediate neighborhood of the nests is comparatively free from black-flies and mosquitoes. Believing that this condition was due to the feeding activities of the Swallows, an attempt was made to aid and encourage them in nesting by increasing the number and extent of the places where they could build. In places where they either did not or could not build, considerable success was secured by providing shelves or supports on which nests could be securely started.

A comparatively easy way of doing this is to nail a piece of 2 x 4-inch scantling lengthwise on the side of buildings, under cover of eaves or other projections that will give complete protection from rains, which seems to be a necessary condition. The scantling is best fastened with a wide side against building and with a clearance from protecting surface of about 5 inches at the upper outer edge of scantling. This seems to be a sufficient clearance for easy approach and is perhaps more attractive than a greater one. Originally a greater clearance was given, but this has been gradually reduced, as it seemed that the Swallows preferred a location where the nests were concealed as well as possible from other birds in the air; perhaps, also, in the case of the Cliff Swallows, where the least material was necessary to build nests right up to the protecting cover, which they usually do when it is near. Apparently a 2 x 4-inch scantling is better than a 2 x 2-inch one, as the 4-inch face furnishes a better brace for the tails of the Swallows when they cling with their feet to the side or upper edge, as they frequently do.

Perhaps an improvement, though involving more work, is to fasten a strip of wood $2\frac{1}{2}$ inches wide by $\frac{3}{8}$ or $\frac{1}{2}$ inch thick on top of the scantling and to roughly round the outer edges of the strip. The half-inch projection beyond the scantling offers a convenient foothold for the Swallows when clinging to the side.

While undoubtedly preferable, it is not necessary for supports or brackets to be placed high from the ground under eaves of roofs of two-storied buildings, as the Swallows will build under roofs of piazzas and porches when construction is favorable. Probably they always choose a spot with a perpendicular surface on at least one side of the nest-place.

The brackets or supports can be painted the same color as the surrounding wood-work, so as to be less conspicuous to people, but, if painted, it is best to leave the surface of the wood rough, not plane it smooth before painting.

The first supports put up were simple shelves of thin board from 2 to 6 inches wide, fastened to sides of buildings at various distances, as great as 18 inches, below the eaves. These were used by the Swallows to a certain extent. Wide supports are objectionable where there are English Sparrows, as they will build their nests on them, while they have difficulty in doing so on those as narrow as 2 inches.

On buildings where the Swallows have not built before, it may be better the first year to place supports, or some of them, farther down from the eaves than 5 inches, so as to be more apt to attract the notice of the Swallows as they fly past. Nests are seldom built on the north side of buildings; of the other exposures, the south seems to be the favorite.

The shores of the lake in locality mentioned are sandy, and there is no clay in the vicinity, so that the Swallows are dependent for their building material on the mud which they gather from holes in dirt roads or depressions in bare ground, where water stands after rains.

Apparently, they can postpone the building of nests and laying of their eggs for a considerable time when they are unable to

secure material for building or completing nests. To supply them with mud in unusually dry seasons, depressions in ground have been filled with water from a hose, the supply being replenished as water disappeared. It is astonishing to see how quickly the Swallows will discover such a spot and gather around it in large numbers, starting almost immediately to carry away the mud for their nests.

While the Barn Swallows usually, and perhaps preferably, build their nests inside of barns and similar buildings which offer opportunities for nesting, they probably would build much more frequently on the outside if they found suitable places, and, perhaps, they could be attracted to many buildings they do not now frequent. The Cliff Swallows could, perhaps, also be attracted to more buildings. They are generally supposed to select one or a few buildings in a neighborhood for their nests. It would be interesting to investigate and see if the buildings selected are those which both offer favorable sites for nests and are nearest to a supply of mud or clay for their construction. For their nests they require considerably more material than do the Barn Swallows.

Perhaps some of your readers will be sufficiently interested to study and experiment on lines suggested in this article and add to the general information on a subject about which little or nothing has been published.—WILLIAM GOODSELL, *Bay Pond, Franklin County, N. Y.*

Dixie, a Tame Robin

Dixie was one of those more unfortunate members of a large bird-family, who, through some accident, left the home-nest at a very tender age. But, unlike many other such unfortunates, this sad accident did not end his career. We had been out bicycling one early June day in 1913, and, while walking up a hill, had discovered him, an inadequately feathered young Robin, lying on the sidewalk, legs extended, and flapping feebly, while his enormous bill emitted faint croaks. Of course, we picked him up and carried him home with

us, where he received, among other things, his Christian name of Dixie. A small basket with a handle, lined with soft grass, was his home, and there he lay on the bottom of it, undecided whether to live or die.

We were now confronted with the problem of food and drink for our new pet. Worms were probably the natural diet, but that meant we would have to dig for them in the garden. We must, therefore, find something simpler, something requiring less effort on our part. So we consulted a book on birds. One chapter was devoted to the rearing of young birds, and in this we found that finely crumbled hard-boiled egg-yolk and potato would be the proper thing. This, then, was Dixie's diet for two months or more. Still following the book, we fed him frequently during the day, but at rather irregular intervals, I'm afraid.

As regards quantity, we were at a loss, so we held his bill open, stuffing the egg down until he choked and flopped, whereupon we stopped. We followed the same method in regard to his drink. With a medicine dropper we injected water until he indicated by a contortionist stunt that he could hold no more.

In this same chapter on the rearing of young birds, the author makes the statement that it is practically impossible to raise baby Robins—they are too delicate. But Dixie thrived from the first and grew steadily. Once his basket got left out in the cold entry during the night, and the next morning Dixie lay stiff and cold in the bottom. Apparently, he was perfectly dead. On a chance, however, we let him warm up gently in the oven, and in the course of the morning he came to and was as lively as ever.

In a week or ten days he had started to feather out and could hop on the handle of his basket and sit there. A portable wire-netting enclosure was built for him and placed out on the shady lawn. Here he stayed when out-of-doors. And again he had a narrow escape, when one day he got out and the neighbor's cat almost killed him. We were positive that this tragedy

had occurred, and were loudly lamenting the fact when Dixie hopped quietly out from under the ferns up close to the house where he had taken refuge. Indoors, he was allowed the freedom of the kitchen, where he managed adroitly to keep himself from getting stepped on and won the affection of the cook.

As he grew, he developed a distinct personality. He had a temper like a red-headed Irishman, was extremely dictatorial and selfish, but very fond, in his own way, of father. At a whistled call from him, Dixie would always appear, and would suffer himself to be handled in any way. With other members of the family, however, he was merely tolerant, and indignantly resented being fussed with too much. Here I may mention an interesting, instinctive trait. When one went to pick him up, he would be willing to hop onto one's finger or nestle in one's hand, but if one lowered one's hand over him, so as to grasp him by extending the fingers around him, he would squawk and peck angrily. We attributed this to an instinctive fear, perhaps, of being clutched in the talons of a larger bird.

Though now old enough to eat alone, he absolutely refused to feed himself, and would lie on his back, screeching until someone came and stuffed egg or worms down his throat. If you offered too much, he would again scream and peck at your hands. This daily use of his lungs developed a very harsh, piercing note which we could always recognize as his, easily distinguishing it from the calls of other Robins. Besides his egg and potato diet, he now ate worms and grasshoppers—when we would catch them for him—but he never made any attempt to get them for himself. In our walks through the fields he would follow in the rear, generally protesting, for "what he most liked was to hop on the toe of father's shoe and ride that way. "Don't do anything for yourself that anyone else can do for you" was Dixie's motto, strictly lived up to.

Toward the last of September we commenced to pack up to return to our home near Boston for the winter. During the

general upheaval connected with closing a house and transplanting a large family, we discovered another characteristic of Dixie's. He loved noise—grating, pounding, squeaking noise. When barrels and boxes were nailed, he would sit on the top, within a couple of inches of the crashing hammer, perfectly happy. Another attractive pastime was riding the carpenter's plane in its swift journeys along the surface of a board.

By this time Dixie was about full grown. He used his wings to fly off to a nearby grove, but would always return upon hearing the familiar whistled call. Nights he spent sleeping in the cellar, but once he stayed out. It was a wet, shivering, woe-begone Dixie that we welcomed in the early morning.

When the time came to leave, not one of us could bear to leave behind our dictatorial little friend and protégé, but there seemed no other way out. The difficulty was solved, however, by buying a small wicker hand-bag, cutting little holes in the sides, and carrying him along with us in that. Thus Dixie traveled some one hundred miles from Amherst, Mass., to Wellesley Hills, attracting no little attention at way-stations, as he popped his head in and out and squawked for food.

But in his new home, Dixie grew wilder and wilder. His trips were longer and more frequent, and he came less promptly at our call. Then he took to sleeping out at night, but, even so, he always returned very early in the morning, shrieking at the door until father came out and talked to him. Several times we thought he had left for good, but after a few days he would return. One Sunday afternoon in October, father was working in the cellar. All afternoon Dixie hung around the window, seemingly much distressed about something. That night he disappeared as usual. But when, after a week or so, no Dixie screamed at the door, we knew he had gone South.

Spring came around again, and when the first Robin hopped on the lawn, we thought of Dixie. Would he come back? Had he,

perhaps, already returned to Amherst? But early one morning there was the familiar squawking at the door. There was no mistaking that hoarse, imperative note—Dixie had returned! After having been brought up in Amherst, and later spending only a short time in Wellesley Hills, he had returned to the latter place from whence he had gone South.

Yes, there was Dixie at the door, but a confused, puzzled Dixie. He had come back to the old place; habit and perhaps some vague memory urged him to come and be fed and petted. But instinct, stronger than habit, and a newly acquired fear kept him from coming down to us as he had always done. Down he would swoop to within a foot of the porch, and back he would dart to sit on the nearest tree, squawk despairingly, and then repeat the process.

Dixie spent that whole summer with us, but after the first few mornings he never ventured up to the house. We knew he was in the vicinity by his shrill, angry call, particularly in the early mornings and late evenings. We even guessed at the location of his nest and pitied his family, unless the southern climate had changed his disposition, but Dixie had grown wary and distrustful, and, although always around the house and grounds, would never come down to us in his old friendly way.

For three springs following, when the Robins came back, we were positive that Dixie was with them, for at sun-up and sun-down we would hear his angry, impatient squawk from the nearby trees. But these last two years we have not been so sure. That peculiar note of his has lost some of its harshness, and we may be mistaken, when, at a shrill call, we say, "There's Dixie!" That Robin, sitting there in the dusk on the tree across the way, breaking the soft stillness with an impatient squawk, may be Dixie and it may not—we hope so! But we like to think, anyway, that cross-tempered, dictatorial little Dixie is still alive and that he comes back to us in the spring.—MARGARET PRATT, *Wellesley Hills, Mass.*

To Hatch and to Raise

Somewhere near the middle of June, we discovered that a pair of Yellow Warblers had chosen to build their nest in a syringa bush close to our living-room window. Here was an opportunity to watch a bit of bird-life without leaving the house.

The three eggs were hatched out June 30. By the next afternoon one of the young birds appeared larger than the others. Another day, and there was no doubt about it; the difference was obvious. No wonder, for this greedy individual hardly permitted the others to be fed at all. Toward evening, on July 2, one of the three, which had remained a little, throbbing lump of pink flesh, ceased to lift its head when the mother bird came to the nest.

Up to this time, I had accepted the larger individual as a young Yellow Warbler, but it now dawned on me that it was a Cowbird. And this became more evident as the disparity in size between the two remaining occupants of the nest became more marked. One could almost see the Cowbird grow, and as it grew, it more and more completely dominated the food-supply.

July 4 was a hot day, and the Cowbird was restless. The nest was now hardly large enough to hold both it and the Warbler, and the latter was badly crowded and maltreated as its big nest-mate moved around in the narrow quarters.

So matters continued until the forenoon of July 5, when the Warbler was several times almost, and then quite, crowded out of the nest by the Cowbird. It managed, however, to hang to the nest by what, in the case of a human being, would be the chin, and after a lively struggle, succeeded in getting into the nest again. But it appeared to be utterly exhausted. The struggles of the little fellow were too much for my scientific attitude; I concluded to take a hand. Securing a Warbler's nest of the previous year, I fastened it to the bush a foot below the original nest. Into this I put the Cowbird, leaving the young Warbler in the old nest.

The adult Warbler came to the old nest, fed its one occupant, and seemed not the least disturbed by the absence of the other. In this way the young Warbler was fed four times without interference from the Cowbird. When the adult came the fifth time, the Cowbird made such a commotion that its foster mother was attracted to it. Thereafter she went each time to both nests, but always to the old nest first. The Cowbird, however, was so loud and insistent in its demands for food that often the mother bird would stop in the very act of offering food to the Warbler and take it down to the Cowbird. That night she covered her own offspring.

A week after being hatched out, July 6, the Cowbird was larger than the adult Warbler, and the nest was being spread all out of shape by it. The young Warbler, on the contrary, was showing signs of weakness, at first only listlessly reaching for the proffered worm, and then paying no attention to it whatever. The mother bird was obviously disturbed. Going to the nest with a worm or gnat in her bill, she would chirp several times, waiting for it to be accepted. The young Warbler remaining motionless, she would then feed the Cowbird, but return immediately to the old nest, and occasionally settle herself for a little time on the little Warbler before she flew off again to the hedges. In the afternoon a shower came up, and she sat on the nest until it was over, a feathered epitome of solicitude. Nothing, however, availed. When, after the shower, she came again with food, the occupant of the old nest was beyond the want of it. Until well into twilight she fed the Cowbird, continuing, however, to go to the other nest first, and after dark she protected the little dead Warbler from the night air.

The next day, July 7, she devoted herself entirely to the Cowbird which now sprawled over the top of its distorted nest. Nor did she any longer go first to her own nest. Only occasionally, before flying off again for more food, would she hop up and examine the nest and the dead bird. And that night she slept away from home.

On the 8th she was on hand early, and

busier than ever. Her step-child, now over twice her own size, had an insatiable appetite. The Cowbird sat boldly on the edge of the nest, sometimes almost falling off in his eagerness for what she brought. During the forenoon it moved to a nearby branch, and, later, to the ground. In the afternoon it tried its wings for distance, and although it had had no practice, easily crossed the road to the top of some sumach bushes. Before sunset it had ventured to the willows along the lake-shore. And everywhere its faithful foster mother followed with such dainties as she knew how to find.

I saw what I took to be our Yellow Warbler for the last time on July 10, when she came and once more examined the old nest. Following her as she darted through the trees toward the lake, I heard the voice of a young Cowbird pleading for food. "I thought so," I said to myself, but I was wrong. This Cowbird was being fed by a Song Sparrow.—M. C. OTTO, *Madison, Wis.*

An Eccentric Ovenbird

On the morning of the second of July (1918), at about 10.30, I was startled to hear the Ovenbird's flight-song repeated in the air over the pines toward the mountains. He sang the entire song and then darted down into the trees. About half an hour later, I heard it again, this time over the birches, to the west. Once more he sang—at 2 o'clock—over the maples, eastward.

The next day, he sang, at 9 o'clock. This time, and on the 5th of the month, he sang three times before 4 o'clock. He repeated his song on different mornings—fifteen times in all—the last on August 31—and every time before 3 o'clock. I think it was the same eccentric bird who sang every time, for the notes were the same on each occasion. Bradford Torrey, in 'Birds in the Bush' says that he heard the Ovenbird sing but three times before 3 o'clock in the afternoon.

In the evening this song is a common one near our house, situated, as it is, in the midst of the forest. Through June, July,

and part of August it can be heard half a dozen times every evening between sunset and dark. Even tonight (September 5), as I write, one rises from the trees, uttering excited 'chips' and bursts into melody. But what does the morning singing of this peculiar Ovenbird mean? Has he lost his sense of time? or is he a lover singing, perhaps, for a lost mate?—THEO. SPENCER, *Chocorua, N. H.*

The Cape May Warbler in Southern Maine

During the three years previous to 1917, two or three persons who are interested in birds reported that they had seen the Cape May Warbler in the migration season.

One lady, a keen observer, whose home is very favorably situated for the study of birds, saw two pairs in May, 1915, and again in September, when they were accompanied by their young.

This was, to me, extremely interesting information, and last year I diligently sought to find the Cape May, but not until this spring (1917) were my efforts rewarded.

On May 25, in company with a bird-loving friend, I was standing among some low trees and bushes at the head of a small pond, watching a flock of birds that was flying about us, in which were two beautiful male Rose-breasted Grosbeaks and one female, three Baltimore Orioles, two Purple Finches, two Northern Parula Warblers, two Canadian, one Wilson's, and one Blackpoll, when, suddenly, I caught sight of a bird that was new to me.

In an instant I thought what it was, and, turning to my friend, I exclaimed, "I do believe that I just saw the Cape May Warbler!" As I spoke, the bird flew into a bush close by us, and she, having previously seen that Warbler, said, "That is the bird," and, indeed, he was a fine male.

Never was a bird more obliging than he, for he flitted about us, displaying all his markings to the best possible advantage. For me, it was a moment of delight.

On May 28 I saw in another locality,

also near a small pond, three Cape May Warblers, two males and a female, and my quest was ended.

As the bird has been seen by so many observers, I think it probable that it may become a migrant to this part of our state, and I certainly hope that such may be the case.—SARA CHANDLER EASTMAN, *Portland, Maine*.

Another Wire Wren Nest

I have read with interest the article in BIRD-LORE of July-August, 1918, on, 'A Unique Wren Nest Made of Wire.' A similar nest was found last year in a bird-box on the place of Mr. Wm. B. Conrad, Nyack, N. Y. This nest was composed largely of small-mesh chicken wire, rusty hairpins, and other pieces of small wire. One of the pieces of chicken-wire, however, must have required a great deal of ingenuity to get it into the hole of the bird box, as it took considerable space of time for Mr. Conrad to fit it in such a way as to go back into the hole.—ALBERT MOYER, *New York City*.

Prairie Horned Lark

I find on page 346 of BIRD-LORE for September-October, 1918, breeding-areas of Horned Larks. I notice that the breeding-area of the Prairie Horned Lark does not include any of West Virginia. Three years ago last summer a brood of Prairie Horned Larks was reared within the corporate limits of Morgantown, W. Va. I saw the young birds in the nest when they were about large enough to leave it. Prairie Horned Larks have been seen near Morgantown several times; only the one nest mentioned has been found.—A. J. DADISMAN, *Morgantown, W. Va.*

Pelagic Habits of Kittiwake Gulls in Winter

It may, perhaps, be of interest to give some notes regarding our return voyage from Brest to New York. During the entire trip (Jan. 24 to Feb. 1, 1919) Kittiwakes were in constant attendance in the

wake of our transport. However, the flock on each succeeding day was probably composed of new individuals. Between twenty-five and fifty were usually to be seen hovering over the path churned up by our propellor. Any scraps or refuse thrown overboard would instantly attract a swarm of fluttering wings. Some would alight on the water, with poised pinions; others disappeared beneath the surface in pursuit of some morsel.

Occasionally we disturbed bands of Murres in their ocean solitudes. At our approach they made away in slow, clumsy flight. A few sought refuge beneath the surface. These would soon appear again, only to take wing in consternation.—LAWRENCE L. LOFSTROM, *Cambridge, Minn.*

A Good Word for the Blue Jays

I have frequently seen statements derogatory to the character of the Blue Jays and would like to tell a little in their favor.

Friends of mine, living on the main street of the village, have, for two summers, had the Jays nest and raise their young in a cedar tree close to the front of the house.

I asked the man of the house his opinion as to the Jays being thieves and undesirable. He replied that, both seasons, Robins had nested in the same tree with the Jays, and that whenever there was a quarrel amongst them, invariably it was the Robins that commenced it, but the Jays always were the victors. He said that he never knew the Jays to disturb the Robins' nests, eggs, or young, and that he considered them desirable bird tenants.

When I visited the nest this May, there were four young birds nearly ready to leave it. Within two or three days thereafter, a great commotion was heard in the tree, and, upon investigating, my friends found that a red squirrel was robbing the nest. The man rushed for his gun, shot the squirrel, and saved the life of the fourth little Jay, the other three having been killed before help arrived. A score for the

Blue Jay and against the red squirrel!—
GRACE L. WHITE, *Watkins, N. Y.*

Yellow-Throated Warbler in Central Park

In Central Park, New York City, on April 15, 1919, I had the pleasure of seeing a Yellow-throated Warbler (*Dendroica dominica* subsp.). The yellow throat and breast were plainly seen, as were also the black cheek-patches and streaks on sides. My identification was promptly checked up by examination of skins in the Natural History Museum. The bird evidently stayed in the vicinity, as it was seen authoritatively several times later in the same week.—LAIDLAW WILLIAMS, *New York City.*

[April 16 was a stormy day. On the 17th the bird was seen again by Albert Pinkus, and Messrs. W. DeW. Miller and H. I. Hartshorn, from the American Museum, accompanied him to the Park, corroborating the identification. Dr. E. Eliot has since called BIRD-LORE on the 'phone to report having seen the Yellow-throated Warbler on April 17 in an oak tree near the Schiller Statue. The others had seen it at 'the point' which projects into the lake. It has not been reported since the 17th, though observers have been on the lookout for it. Mr. Miller was not satisfied as to whether the bird belonged to the South Atlantic or Mississippi Valley race of this species, and since he has had powerful glasses available to determine this point, no one has seen it.—J. T. N.]

THE SEASON

XIII. February 15 to April 15, 1919

BOSTON REGION.—The past winter until mid-February, was one of unusual mildness and lack of snow. The latter half of the month, however, bade fair to redeem the vigor of the season with several minor snowstorms and cold days. Yet February 22 brought Prairie Horned Larks at Wayland, the first, perhaps, of the migrants to return. A few reports of small roving flocks of Robins and Cedarbirds came in the latter half of the month, perhaps birds that had wintered at no great distance to the south and were already pushing north. The appearance of such flocks in the last week of January, or in early February, is an almost usual occurrence with us. March opened auspiciously with warm, enticing days. Promptly at the first beckoning of spring, on March 5, arrived the vanguard of the migrants. Red-winged Blackbirds, Bronzed Grackles, Meadowlarks, Song Sparrows, Robins, and Bluebirds came all together and in some numbers, a well-marked wave, though of a few of these species scattering individuals had been earlier reported. On the same day a large flock of nearly forty Pine Siskins was seen

feeding on gray birch seeds. But the fickle New England climate forthwith sent a succession of colder days that stopped further pronounced flights. An unusual abundance of Bluebirds was noted in certain places, as at Arlington Heights, where a flock of forty or more stayed several days on the southerly slopes of an orchard, held up in their northward flight by the cold which reached 10 degrees above zero on March 14. The remainder of the month saw little change. There was a small increase in the number of arriving birds but no very marked flight. Juncos came, but not in great abundance, by the 7th and days following. Fox Sparrows were reported from towns south of Boston about the middle of March, but their numbers were small in the latter half of the month, and though a few sang from the thickets, they did not become common till the first week of April, when the main flight went through, and had passed by the 10th of that month. Flickers seemed less in evidence than usual, and especially the wintering birds. One was heard singing his wake-up roll in Cambridge on March 3, but this was

doubtless a bird that had been seen at intervals all winter in the city limits, perhaps the same individual that has spent the winter near the Harvard College grounds for a number of seasons. In the outlying country, Flickers seem notably scarcer than in other years. Possibly many wintering birds succumbed to the severity of the previous winter.

About March 20, single male Robins appeared in the gardens and yards of Cambridge and vicinity, the local summer resident birds arriving, no doubt, for they seemed at home at once. A blizzard in the last days of March, with snow and cold ranging to 14 degrees above zero, caused a temporary disappearance of Bluebirds at Arlington, where so many had been seen shortly before. The other birds seemed to have survived well, however, gathering into sheltered spots and about the springs, although there were reports of many killed. A visitation of Killdeer accompanying this storm was a remarkable feature. Single birds were reported afterward from several localities.

April to the middle of the month, has been a seasonable period, with warm rains, east winds, and fair days, in typical New England fashion. Vesper Sparrows came on the 6th, and numbers in full song were seen on later days. Crows were nest-building at the same time. The 13th saw many arrivals—some of birds that average a few days later here. Thus were noted Barn Swallows, Yellow Palm Warblers, Ruby-crowned Kinglets, and Hermit Thrushes. Tree Swallows and Cowbirds had come a few days previously.

Of the winter birds, Northern Shrikes stayed well into March, one being seen on the 20th at Arlington; Redpolls were reported there on March 7th. Evening Grosbeaks mostly disappeared during February, though a late report of a few birds seen in Essex County brought their stay into early April. A few Hairy Woodpeckers still frequent the woods and come freely into the more settled parts of the towns. Herring Gulls no longer gather in such large numbers in the Back Bay basin as they did in winter, but a few continue

to frequent its waters daily. On the whole, the spring is hopefully normal so far.—GLOVER M. ALLEN, *Boston, Mass.*

NEW YORK REGION.—The mild winter was followed by an early spring, with budding vegetation and earliest flowers unusually advanced as to date, and the first migrant birds came back at dates averaging earlier than usual. A flock of Rusty Blackbirds in song and several scattered Robins were noted at Mastic, Long Island, February 22. Grackles appeared in Garden City, February 27. In this west-central part of the Island, a few Meadowlarks (surprisingly absent during the present winter) began to be noticed during the first week in March, and the species was fairly common by the 20th of the month. At Plainfield, N. J. (W. DeW. Miller), Cowbirds and Rusty Blackbirds were first seen on March 2, and the Hermit Thrush on March 30. The first ten days of April more than the usual number of migrant species were reported in Central Park, New York City. A sharp cold snap the last of March seems not to have delayed the arrival of birds, with the possible exception of the Chipping Sparrow. The first Chipping Sparrow was noted at Garden City April 10, just a week later than in 1918. During this two-month period, a small flight of Pine Siskins has been noticed in several localities.

This last Sunday (April 13) was a windy day on Long Island, alternately overcast and chilly, bright and sunny. A Robin was seen sitting and a Song Sparrow carrying nesting material. In the woodland, a scattered flock of about ten Yellow Palm Warblers was moving through the undergrowth; nearby was a Sapsucker that had driven a row of punctures in one of the trees. A number of Cowbirds were on the ground among some cattle in a meadow. In town, toward sunset, a Hermit Thrush was seen to fly up into the trees. For a week or two Flickers have been much in evidence, alternately calling and drumming, their drumming with more of a whirr to it than that of Hairy or Downy Woodpeckers.—J. T. NICHOLS, *New York City.*

PHILADELPHIA REGION.—Continued mild weather prevailed throughout February and March. The heaviest snowfall of the winter, three inches, occurred March 14, but scarcely remained a day. During the last four days of March, a violent northwest gale caused noteworthy damage in this vicinity and literally blew a considerable portion of the water out of the Delaware River. The water was from 2 to 5 feet lower than the usual low tide, and a number of vessels grounded. For the first time in the writer's experience, at this season, no Herring Gulls were seen about the ferries, the birds apparently having taken refuge from the gale in more sheltered situations.

The average number of Ducks arrived during late March and early April. Blue-bills, Black Ducks and Mergansers made up the bulk of the flight. Six Red-breasted Mergansers were observed April 6. This bird is a much less common migrant on the Delaware River than the American Merganser.

There is an apparent dearth of Brown Creepers and Golden-crowned Kinglets this spring, few individuals of either of these species being seen. The Phoebe has returned in increased numbers, in contrast with last spring, but, apparently, has not yet reached its normal abundance.

One of the pleasing features of the season was the abundance of Fox Sparrows in full song, their mellow whistle being a delightful addition to the early spring bird-chorus.

A Barn Owl, recorded April 6, is probably worthy of mention. While this Owl is quite often seen during the fall and winter, it somehow usually succeeds in finding some safe and obscure retreat during the remainder of the year. This particular Owl had taken refuge in a large dead water-birch, the bird being flushed from behind a good-sized strip of bark, sticking up and out from the trunk and held more or less in this position by entwining vines.

March and early April migrants were recorded as follows: March 2, Flicker and Purple Grackle; March 8, Purple Finch; March 23, Savannah Sparrow; March 30,

Vesper Sparrow; April 2, Phoebe; April 6, Wilson's Snipe, Chipping Sparrow, and Yellow Palm Warbler.—JULIAN K. POTTER, *Camden, N. J.*

WASHINGTON REGION.—The status of bird-life about Washington during the months of February and March, 1919, was rather peculiar. Following a winter of unusual mildness, the weather became relatively colder in March, after the vegetation had made a good start. This recrudescence of winter at the beginning of spring has had a curious effect on the birds.

Some of the rare winter residents, such as the Robin and the Killdeer, have been more than ordinarily numerous, but several others, such as the Vesper Sparrow, Fox Sparrow, and the Cowbird, had not, up to April 1, been reported at all. The same is true of several migrants, such as the American Pipit, Purple Martin, and Pine Warbler, all of which should have arrived by the last of March. Even the Phoebe, which usually appears at Washington by March 10, and occasionally even remains throughout the winter, was not reported until March 14, although it had been seen at Culpeper, Va., on March 7.

On the other hand, a number of migrants appeared before their average time, such as the Chipping Sparrow, which was seen on March 23; the Brown Thrasher on March 25; and the Blue-gray Gnatcatcher on March 30. The Mourning Dove, too, which, while it occasionally winters here, ordinarily does not appear until about March 21, was seen this year by Dr. A. K. Fisher as early as February 16 at Plummer's Island, Md. The Purple Grackle appeared in force earlier than common, having been first noted on February 17 by Mr. N. Hollister. Furthermore, the Tree Swallow was observed two days earlier than ever before in this vicinity—on March 24 at Bethesda, Md., by Mr. Raymond W. Moore, its very earliest previous record being March 26, 1887.

Several species, such as the Song Sparrow and Robin, were singing much more freely than is usual in February; a Winter Wren was heard in song by Mr. A. Wet-

more on March 16; and the regular summer song of the Chewink by Mr. E. A. Preble on March 23.

Owing probably to a decrease of aeroplane and hydroplane activity along the Potomac River, the large flocks of Ducks have again moved up the river to Washington. Most of these birds certainly identified prove to be Mallards, Black Ducks, Greater Scaups, and Lesser Scaups. On March 25 there was a long flock of some 3,000 individuals lying quietly on the other side of the river towards Alexandria. On this date the American Merganser was fairly common on other parts of the river.

Such erratic bird movements as have been in evidence during February and March of this year apparently indicate that the weather plays an important part in some bird migrations; and the subject still presents an inviting field for investigation.—HARRY C. OBERHOLSER, *Biological Survey, Washington, D. C.*

OBERLIN REGION.—The first clear migration wave began on February 19, when the first group of Robins appeared. On the 21st there was a marked increase in the number of Crows, Song Sparrows, and Northern Flickers; on the 25th the first Bluebirds, and on the 28th the first flock of Bronzed Grackles. There was no further movement until March 2, when the first Migrant Shrike was seen; then on the 3d the first Mourning Doves, the 4th the first Killdeers, these making up the second distinct wave. Then came the usual mid-March filtering in of Red-winged Blackbirds on the 10th, Meadowlarks on the 12th, Towhee on the 13th, Cowbird on the 15th, Lesser Scaup Duck and Bufflehead on the 17th, Rusty Blackbird on the 20th, Phoebe and Shoveller on the 26th, and Vesper Sparrow on the 29th. Fox Sparrow came on April 2d, Great Blue Heron and Belted Kingfisher on the 3d, Field Sparrow on the 5th, Hermit Thrush on the 6th, and Turkey Vulture, Wilson's Snipe, Chipping Sparrow, Swamp Sparrow, Yellow-bellied Sapsucker, Purple Martin, Tree Swallow, Upland Plover, Louisiana Water-Thrush, and Savannah Sparrow on the 7th. Ruby-

crowned Kinglet and Woodcock came on the 8th and should be added to this distinct wave. Brown Thrasher and Ruddy Duck on the 10th, Mallard, Coot, Barn Swallow, and Osprey on the 12th, and Spotted Sandpiper on the 13th belonged to this movement, but were a little delayed.

A study of the records reveals the fact that practically all of the March records are late except that of the Ducks. Eight species which normally arrive in March did not come this year until April, but five mid-April species were a week early. Thus far there have been no arrivals on the median date of arrival for the species.—LYNDS JONES, *Oberlin, Ohio.*

MINNEAPOLIS REGION.—The third week of February continued the prevailingly mild weather of the past winter, but on the 24th of that month the thermometer fell to — 7 degrees, and the cold continued with an intermission of only one day—March 3—to the second week of March. February was the coldest month of the winter, though slightly above the average of other years. The mean was +16 degrees, the highest temperature +37 degrees, and the lowest, —13 degrees on the 27th. Five or six inches of snow fell on the last days of the month. March, after the subzero weather on the 1st and 5th, was a mild month with, for the most part, pleasant and spring-like days, the ground freezing hard for the last time on the 26th and 27th. The first thunder and lightning storm of the season occurred on the 29th, with a temperature of 76 degrees above zero in the sun at 3 P.M. The first half of April continued mild, but on the 14th it became colder, and a heavy, wet snow fell continuously for nearly forty-eight hours. The ice went out of the Mississippi River above the Falls on March 22, the channel below having been clear for some time before. About this time a space of a hundred feet or so was open around the larger lakes in the vicinity, and on April 5, the ice broke and soon disappeared, several days earlier than usual.

Following the mild winter, spring activities began somewhat earlier than usual,

but still not as much earlier as might have been expected, due, perhaps, to the spell of severe weather at the end of February and in early March. Hazel bushes were in bloom and the buds swelling on the maples and elms on April 6. The earliest pasque flowers had opened some days before. After the limited numbers of last year, it was a happy surprise to find the Juncos and Tree Sparrows coming in great abundance in late March and early April. The Purple Finches, here all winter, were greatly added to about April 1, and since then their sweet warble has been common music hereabouts. Redpolls, abundant all winter, disappeared early in April, and the last Bohemian Waxwings were reported on March 29 (Thayer). The Horned Larks that were here the latter part of the winter left about March 15, and none has been seen since in the places frequented by them.

For assistance in compiling the following record of spring arrivals, I am indebted to Mr. Burton Thayer and Mr. F. W. Commons.

February 22. A Kingfisher, probably a winter bird.

March 9. Crows became common (some here all winter).

March 15. Numerous Robins and Bluebirds (all males); Red-winged Blackbirds (males) in nesting-places.

March 18. A Killdeer and Herring Gulls.

March 22. Flickers (common April 13); Great Blue Herons; Song Sparrows (common April 6).

March 25. A Whistling Swan, killed near St. Paul by some boys, sent to the Museum by Prof. Riley, State Entomologist. Report says that a number were seen in this vicinity (Avery).

March 27. Meadowlarks (common March 29); Rusty Blackbirds abundant.

March 30. Red-headed Woodpecker; Migrant Shrike.

April 1. A pair of Sparrow Hawks.

April 6. Phoebs; a Pied-billed Grebe; Swamp Sparrows (common April 13); Ruby-crowned Kinglets (common April 13); Loons; Brown Creepers very numerous (a few present all winter).

April 10. A Fish Hawk, taken at St.

Paul, presented to Museum by Mr. Carlos Avery. This bird was formerly common in Minnesota but is disappearing of late years.

April 13. Golden-crowned Kinglets; a male Sapsucker feeding, as usual, in the early spring, among the catkins of a poplar tree; American Coot; Wilson's Snipe; Hermit Thrush; flocks of Lesser Scaup and Ring-necked Ducks in the lakes; a White-breasted Nuthatch and a Robin building.

April 14. First Myrtle Warblers.

The most noticeable feature in the spring movement thus far is the considerable increase in birds over last year.—THOS. S. ROBERTS, *University of Minnesota, Minneapolis, Minn.*

KANSAS CITY REGION.—This region, lying close to the winter home of so many species of birds,—in fact, being the home itself of such a goodly number,—the effect of an exceptionally mild and open winter is readily noticeable in the early start of the northward movement. The winter just past was such a one, and while, for some unaccountable reason, the wintering birds were far less numerous, both as regards species and individuals, than during less favorable years, the sudden and early appearance of large numbers of Grackles, Red-wings, Rusty Blackbirds, Meadowlarks, several species of Sparrows, both Kinglets, Robins, and Bluebirds indicated that our usual winter crowd had spent the season not far to the south.

The usual cold storms of mid-March seemed to have had little or no effect on the restless throngs, and, by the second and third weeks of the month, migration was under way in earnest. The continued unaccountable absence of the usual numbers of Harris's Sparrows in their accustomed haunts has caused no little speculation among local observers as to the reason for this favorite deserting us for a season. Purple Martins were a week ahead of schedule, two being seen on March 29.

Black and White Warblers were seen on April 5, which is six days earlier than any previous date of arrival known to the writer. Ruby-crowned Kinglets were

heard in full song on the 6th, which is quite unusual for this region.

The present cold period of April 9 and 10 finds Robins setting on eggs, with the trees containing the nests just beginning to bud. By the time the more northerly nesting hordes of Robins have reached this point, our local birds will be feeding their first brood. These same north-bound migrants will have returned in the fall, square-tailed and fresh in their new coats, before our own ragged and overworked birds have completed their post-nuptial moult.

The notorious and troublesome opposition to the Federal Migratory Bird Law by the organized sportsmen of this and surrounding territory is as bitter and determined as ever. The situation, however, has greatly improved lately, owing to the untiring and efficient efforts of R. P. Holland, the Biological Survey's splendid field agent in this region. Over a dozen arrests have been made, and though a Missouri injunction temporarily embarrasses Mr. Holland's office in the further execution of its duties, the good work is on in earnest and the early heavy flight of water-fowl has been protected against the customary

spring slaughter.—HARRY HARRIS, *Kansas City, Mo.*

DENVER REGION.—It is common knowledge that the Robin does not burst forth in full song until he has been in his breeding-area for some time in the spring. Hence it was a surprise to the undersigned to hear, on March 3, 1919, at daybreak, a Robin whose song was, to the writer, as abundant and full as any nuptial song he has heard later on in the season.

The birds have returned rather early this spring, Gamble's Sparrow reaching here very early, having been seen on the hospital grounds March 27, and still being present at the end of this period. The writer has seen, however, very few Bluebirds, much to his regret, noticing but two on March 27 and two more three days later. The Killdeer and Sparrow Hawks have, however, returned about on time, and the Pine Siskins have started to build nests in their usual early and industrious fashion. A family of Long-eared Owls has preëmpted an old Magpie's nest, and gives every evidence of using it as this season's breeding-place.—W. H. BERGTOLD, *Denver, Colo.*



Book News and Reviews

GAME BIRDS OF CALIFORNIA. By JOSEPH GRINNELL, HAROLD CHILD BRYANT, and TRACY IRWIN STORER. University of California Press, Berkeley, Calif., 1918. Large 8vo., 642 pp., 16 colored plates and 94 text figures.

About four-fifths of this volume consists of a systematic treatment, species by species, of the Ducks, Geese and Swans, Ibises, Cranes, Rails, etc., shore-birds, gallinaceous birds and Pigeons of the state of California. For each species there is a description of size and color, marks for field identification, voice, nest and eggs, general distribution, and distribution in California, followed by a running narrative taking up habits, use as game, economic status, etc. Sixteen full-page colored plates are by Louis Agassiz Fuertes and Allan Brooks; 94 excellent text figures are mostly of bills, feet, etc., and nineteen tables relate to such matters as the taking and sale of game, and nesting of certain species.

Introductory chapters treat of the decrease of game, natural enemies of game birds, sportsmen's game preserves and gun clubs, introduction of non-native birds, propagation of game birds, legislation relative to game birds in California, and there is sufficient information concerning technical terms and methods to facilitate the use of the descriptive portion of the book. As regards the decrease of game, it is estimated that "waterfowl and upland game birds have both, on the average, decreased by fully one-half within the past forty years. Very likely the reduction totals much more in many individual species." Many causes have led to this decrease "but all are due in last analysis to the settlement of the state by the white man. Some of these factors, such as excessive hunting and sale of game, are subject to control; but others, such as reclamation of land, and overhead wires, are inevitable."

We learn from the preface that the inception of the work dates from 1912, when it was decided that the staff of the Califor-

nia Museum of Vertebrate Zoölogy should actively interest itself in the conservation of the native fauna. A study of the situation soon led to the conclusion that, as regards game birds, what was needed was not more numerous nor more stringent game laws so much as a better knowledge of these birds and the necessity of conserving them among sportsmen and by the public. 'Game Birds of California' has been prepared as a manual of such information for all the various persons who, for one reason or another, have an interest in these birds. We may safely say that it is a most useful work for this purpose, and that the mass of facts which it presents is admirably arranged for reference. Compared to conditions in eastern states, game birds are still abundant in California, and it is to be hoped that this book will form a basis for their intelligent preservation, in maximum numbers compatible with further settlement of the country.

A mass of information has been brought together from which the student of birds will derive much profit and pleasure, and those of scientific turn of mind will be gratified by the absolutely unbiased manner in which all the facts are presented. We would recommend especially to the consideration of all sportsmen the chapter on 'Natural Enemies of Game Birds,' as there has, of late, been evident in this country a regrettable tendency towards the indiscriminate destruction of Hawks, etc., borrowed from methods used on foreign preserves which are little more than farms for the artificial propagation of game birds, a procedure ill-adapted to conservation over a wider, freer territory.

The colored plates are all of a high standard—real contributions to the published portraits of American birds—but the ones of Mallard and Widgeons by Fuertes and that of the Surf-bird by Brooks stand out preëminently for their excellence. In the general descriptions of transient shore-birds, the authors show a lack of

familiarity with them in the field, contrasted with the very interesting accounts of certain nesting species. Descriptions of their migrating calls, one of the most attractive features of such birds, are especially weak. Similarly, the white 'diamond' in the back of the Dowitcher is not mentioned among the field characteristics of that species, although it is the best and most reliable one, probably because it is not evident in prepared skins.

As should be the case in any such comprehensive work, information is drawn from many sources, and its reference value is enhanced by a convenient list of literature cited, as also by a good index. All in all, the volume is a very satisfactory one, the best that has been published of similar scope, and a model of good book-making. —J. T. N.

BIRDS OF THE KANSAS CITY REGION. By HARRY HARRIS. Transactions of the Academy of Science of St. Louis, Vol. 23, No. 8, 1919. 8vo. 159 pp.

This is an annotated list of 311 species, with four others included as of probable occurrence. In a number of instances more than one race of a species is listed. The Red-winged Blackbird, which nests in this locality, belongs to a race which is also widely distributed to the east. It is very abundant in migration but comparatively few are found in winter, at which season the Rocky Mountain race, as also the one which breeds to the north, may be present in large numbers.

There is a general statement of the times of arrival and departure of migratory birds, and although no attempt is made to give dates consistently throughout, there is much definite information of this character, for instance, an interesting comparison of dates of spring arrival of two Flycatchers, the Phoebe, an early migrant, and the Crested Flycatcher, a late one. In the former there is a variation of twenty-seven days (March 3 to 30) with the mean (March 16) slightly earlier than the middle of this period and an average deviation of six days from the mean. In the latter there is a variation of eighteen days (April 15 to

May 3) the mean (April 27) lies in the latter part of the period, with average deviation of only three days from it.

As this is the first list from the locality it will be of much service to local students. The fact that Kansas City lies in the comparatively little studied Prairie region makes it of especial interest to those who deal with North American birds as a whole, and readers of BIRD-LORE's seasonal reports will find the ones from Kansas City (by the same author) rendered more interesting by reference to this list.—J. T. N.

The Ornithological Magazines

THE AUK.—The January issue deals largely, although not exclusively, with Canadian birds, and the excellence of a number of the half-tones is worthy of notice.

The first part of an annotated list of 'The Birds of the Red Deer River, Alberta,' by P. A. Taverner, is most instructive and is based chiefly on observations made during the summer of 1917; we find 'Notes on Some Birds of the Okanagan Valley, British Columbia,' by J. A. Munro, and 'Further Notes on New Brunswick Birds,' by P. B. Philipp and B. S. Bowdish, the latter article with illustrations of the nest of the Cape May Warbler, of Wilson's Snipe and of the Arctic Three-toed Woodpecker, and with valuable notes on these and other nests of considerable rarity.

The 'Winter Birds of East Goose Creek, Florida' are listed by R. W. Williams, and, on the next page, at the other extreme of the continent in 'Notes on the Summer Birds of the Upper Yukon Region, Alaska,' Eliot Blackwelder describes a country little known to the ornithologist and lists the birds seen there in the summer of 1915. The reader is also taken out into the Pacific Ocean and may read of 'The Hawaiian Elepaio,' by Vaughan MacCaughey,—largely a field study of this Flycatcher, but, nevertheless, monographic in its completeness.

A new subspecies of the Hepatic Tanager (*Piranga hepatica oreophasma*) is described by H. C. Oberholser, who also advocates

certain rectifications—virtually none of them new—in the status of certain forms of North American birds; a new species of Seaside Sparrow (*Thryospiza mirabilis*) from Florida is described by A. H. Howell and several new birds from South America by Chas. B. Cory, but the exact details of these purely scientific matters can scarcely be of vital interest to the average reader of BIRD-LORE, and the reviewer feels that they should here be passed over with briefest comment.

'The Thirty-sixth Stated Meeting of the A.O.U.' is statistically written up by T. S. Palmer. It was wholly a business affair because of the prevalence of the influenza epidemic at that time of the year.

It may be worthy of note that, owing to printing difficulties, for which the editor was in no wise responsible, the January 'Auk' was a fortnight late in publication, thereby breaking all previous records!

In the April number so many cross-currents of opinion are in evidence that no review can do justice to the authors of the various articles. An obituary of Mrs. Olive Thorn Miller, by Florence M. Bailey, reminds us that Mrs. Miller was among the pioneers of those who have contributed so much and so well to the hosts of books on popular ornithology.

A. D. Dubois writes of 'An Experience with Horned Grebes (*Colymbus auritus*) in Montana' describing with minuteness his observations on a nesting pair of these birds which may be seen in some excellent half-tones; Harry Harris, in 'Historical Notes on Harris's Sparrow (*Zonotrichia querula*)' brings together some of the early and late history of this species; W. H. Bergtold discusses the status of 'The Crow in Colorado'; and H. F. Lewis presents interesting notes on 'Winter Robins in Nova Scotia.'

E. T. Seton, writing 'On Popular Names of Birds,' advocates a somewhat eclectic method of obtaining appropriate ones, which, after all, merely emphasizes the fact that language is always in process of evolution, and so the popular name of today may or may not be the name of tomorrow.

L. M. Loomis believes in 'The Reality of Bird Species,' but realities and opinions are somewhat mixed. J. T. Nichols, in 'Problems Suggested by Nests of Warblers of the Genus *Dendroica*,' rests his hypotheses on rather slender assumption, interesting though they be, for we do know that birds of the same species make different nests in different localities, and that concealment is a very relative matter after all. In A. Wetmore's 'Notes on the Structure of the Palate in the *Icteridae*,' the question arises as to how important as a generic character the palatal keel really is; in J. Dwight's 'Reasons for Discarding a Proposed Race of the Glaucous Gull (*Larus hyperboreus*)' there is raised a similar question as to subspecific values, and A. C. Bent, in 'Geographical Variation in the Black-throated Loons,' questions the actual relationship of these birds. They are all controversial matters of opinion rather than of fact.

In addition to the above technical papers, is one by T. E. Penard, reviewing Beebe's 'Tropical Wild Life'; one by C. B. Cory, describing new birds from South America, and one by H. C. Oberholser, bringing together a long list of prospective changes in the A.O.U. Check-List.

'The Birds of Red Deer River, Alberta,' by P. A. Taverner, is brought to a conclusion, and a map of the trip is included. The virtual abandonment of the use of trinomials in this list calls down criticism from W. Stone (page 317) who feels pessimistic about the future of nomenclature which he thinks "is now bearing about all the burdens it will stand." There is comfort, however, in the thought that many other things in the world today are in much the same position.

The death of Dr. Frederick DuCane Godman, a veteran of the A.O.U. Honorary Fellows, is a matter of more than passing interest.—J. D.

BLUEBIRD has begun its eleventh volume with the December, 1918, number as a quarto instead of an octavo. The cover design is also different.—J. T. N.

Bird-Lore

A Bi-Monthly Magazine

Devoted to the Study and Protection of Birds

OFFICIAL ORGAN OF THE AUDUBON SOCIETIES

Edited by FRANK M. CHAPMAN

Contributing Editor, MABELSGOOD WRIGHT

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Bird-Lore's Motto:

A Bird in the Bush Is Worth Two in the Hand

THE EDITOR of BIRD-LORE, left the United States as American Red Cross Commissioner to South America a few days after the September-October, 1918, number of the magazine was issued. Before his departure he had mapped out the three succeeding numbers, so that little remained save seeing them through the press. During his absence, BIRD-LORE's New York office was practically out of communication with him for considerable periods of time, and as he was not expected back until May, and the June number goes to press the latter part of April, it seemed that this number would have to be made up in his absence. About the first week in April, however, we were advised by wireless that he was arriving on a north-bound steamer then off the coast, and the next day found him most opportunely in his office. Ten days or so later he was obliged to leave for France, but he hopes to be again in New York by June 1, to resume ornithological activities which for a number of months have had to take second place in their demands upon his time and attention.

Although while on the South American trip he was able to contribute for each issue of BIRD-LORE an article on some different and interesting aspect of bird-life from the varied tropical countries visited, Dr. Chapman's Red Cross duties necessitated continuous travel, without so much as a breathing-space to devote to the study of birds. He came in contact with a great

many persons of diverse nationalities, but also with our countrymen scattered over the breadth of South America, and was able to bring to them a message concerning America's part in the war for world freedom. As an example of his work, he tells us that on Sunday, January 12, he occupied the pulpit of the Scotch Presbyterian Church in Valparaiso and took for his text 'America's Heritage from England.' A week later he spoke to 1,500 miners in the heart of the Andes. Both experiences were novel to him.

A talented naturalist has published an article in a current bird periodical on the vernacular names of birds, and in the same issue we learn that one of our most active workers in ornithology is preparing, as a hobby, a dictionary of such vernacular names. These days, when the value of democracy in institutions is to the fore, we may reflect that the vernacular names of birds are, and, by virtue of being a part of the living, everchanging language, will remain, perhaps the most democratic feature of the study of birds. If interest in birds is superficial or slipshod, any thorough and precise system of vernacular names will either be disregarded or used in a superficial and slipshod way. Just so far as those interested in birds are in touch with one another and the public will we get uniformity in names throughout the country; just so far as such persons are disorganized will there be a multiplication of local names. Probably the names used by scholars, by sportsmen, or by the man in the street, will never be exactly alike, because the same terms will not equally serve the diverse viewpoint of each. When the man in the street is sufficiently interested 'to vote,' his name for the bird will be accepted and become fixed in the language—slightly modified to fit the needs of others—because he is the majority; and if any one of us cares enough about it to select the best name and to stick to its use, he will exert an influence for its acceptance in direct ratio to the wisdom of the selection, his reputation as a bird-student and his 'stick-to-itiveness.'—J. T. N.

The Audubon Societies

SCHOOL DEPARTMENT

Edited by ALICE HALL WALTER

Address all communications relative to the work of this department to the Editor, 67 Oriole Avenue, Providence, R. I.

We regret that, on account of serious illness, Mrs. Walter has been unable to prepare the editorial matter which she had planned for this issue of the School Department.—J. T. N.

FOR AND FROM ADULT AND YOUNG OBSERVERS

THE MUSEUM BIRD CLUB OF TOLEDO, OHIO

For years the Toledo Museum of Art has maintained a Bird Club for children, of which there are 20,000 members. Each one of these children has signed a pledge card promising to protect wild birds. The Museum has now on its staff an instructor in nature-study. We feel that the study and appreciation of nature is within the province of an art museum, and we are fortunate in having a mayor who is interested in and furthers every progressive movement in the city of Toledo.

I enclose April 2 newspaper clippings of a proclamation by Mayor Cornell Schreiber, of Toledo, which may be of interest to you.—MRS. GEORGE W. STEVENS.

[We quote the following sentences from the Mayor's proclamation:

"Toledo's parks and boulevards are hereby declared to be permanent bird sanctuaries. . . . I hereby appoint the boys and girls of Toledo as guardians of the birds, to work with the city administration for their protection."]

ROBIN REDBREAST, WAR GARDENER

A TRUE STORY

One day last summer Grandma Mack left the pies she was making and Grandpa Mack and little James, who was visiting from the city, came out of the garden to see what the birds were making such a fuss about. They found two old Robins flying around, crying and scolding dreadfully. On the ground was a little bird. It was still covered with down and was so young and helpless it could not even hop. Grandpa picked the little Robin up and climbed into the cherry tree which grew beside the house, and under which the little bird lay, but he was unable to find the nest from which the little bird had fallen.

"Well, James," he said, "I guess we will have to take care of this little Robin."

He got a box to put the bird in and then showed James where to dig in the garden for the long earth-worms which 'Bobbie' liked to eat, and how to feed the little bird. Several times every day after that James dug worms and fed them to his pet. Bobbie grew rapidly and soon learned who furnished his food. Then he went with James to get the worms, and when he had had enough he would jump up on James' shoulder or head, or fly to a limb of the nearest tree and sing his sweetest song. Then it was no longer necessary to keep him shut in his box. He slept in the trees, and during the day he followed James around, often coming into the kitchen. There he stole strawberries from Grandma's pan and bathed in any dish of water that was handy. One day after Bobbie was full grown and very tame, Grandpa said the bugs were eating his beans badly. "Bobbie likes bugs," said James. "Well, suppose you take him out in the bean-patch," Grandpa answered.

James got his pet and went at once into the garden, where Bobbie, without ceremony, began to eat bugs. Up and down the rows he hopped all day. The next morning, when James got up, Bobbie was busy catching bugs in the bean-patch.

The beans in the neighbors' gardens on all sides of Grandpa's were almost entirely destroyed by the bugs, but, thanks to Bobbie, Grandpa had almost a full crop.—SUSAN B. DINSMORE, *Mesa, Ariz.*



JAMES, WITH 'BOBBIE,' HIS PET ROBIN

THE BLACK AND WHITE WARBLER

One day in the summer another boy and I were climbing a tree when we noticed a bird. It had a striped black and white back and a spotted breast. I knew it was a Black and White Warbler. We kept still and watched it.

Then another one came, and they kept coming nearer and nearer, till one almost touched the other boy's foot. At last they flew away and we got down

and went to look for other birds. I have seen them a number of times since come to that same tree, and we call it the "Black and White Warbler Tree."—ALBERT FEARING, (Age 13 years), *Dorchester, Mass.*

FINDING BIRDS' NESTS

I live in Gilbert, Minn., and am the president of the Gilbert Audubon Society. I am very much interested in birds and would like to tell you about my vacation last summer and what I have seen of birds.

Last summer, around the 4th of July, our family went out to Vermillion Lake on an island. Right near our camp, in the bushes, was a nest with three little Robin's eggs in it. I felt them and they were warm. I did not want to frighten the poor mother Robin, for fear she might leave her little ones.

Another day we went on the other side of the island to fish. As we were crossing, my brother found another bird's nest. This one was a Swallow's nest, with three little baby birds in it. I kept away from the nest so the mother wouldn't stay away from it.

I had further adventures with birds, too. After a few days we went home. In Gilbert, near the house where I live, is a forest which my sister and I call the 'Gilbert Park.' There I spend most of my vacation; I try to find birds' nests and other things, which I like to do very much.—GENEVIEVE BROWN, (Age 10 years), *Gilbert, Minn.*

EAVE SWALLOWS NESTING ON A PAINTED BUILDING

On a little church, painted white, in this town there were, by actual count, nearly fifty nests of Eave Swallows. They also built in the eaves of a hall opposite, and this, too, was painted.—ISABEL BLAKE, *Boston, Mass.*

[The question of how frequently these Swallows nest on painted structures was raised in the December BIRD-LORE, pages 447-8. 'Eave Swallow' and 'Cliff Swallow' are two names for the same bird. What is probably the correct solution of the problem will be found in an article by William Goodsell under 'Notes from Field and Study' in the present number of BIRD-LORE.—J. T. N.]

A LIST OF VIRGINIA BIRDS

Last year I organized in my grade—as I have done for a number of years—a Junior Audubon Class. Among the members was a boy of ten, Joseph Jones. I soon learned that he was a close observer of birds and deeply interested in them.

Joe is not my pupil this season, but our common interest in birds has naturally brought us into touch with each other more than once this fall. Several days ago he handed me a notebook which he has been keeping during the year 1918.

I asked his permission to copy some of the notes to send to you for publication. The enclosed notes are just as I found them in his book.—(Miss) E. W. HOLLAND, *Berryville, Va.*

BIRDS THAT I HAVE SEEN IN 1918:

- | | | |
|------------------------------|----------------------------|----------------------------------|
| 1. Tufted Titmouse | 26. Mourning Dove | 53. Wood Pewee |
| 2. Downy Woodpecker | 27. Flicker | 54. Blue-gray Gnatcatcher |
| 3. White-breasted Nuthatch | 28. Chimney Swift | 55. Ruby-throated Hummingbird |
| 4. Hairy Woodpecker | 29. Red-winged Blackbird | 56. Green Heron |
| 5. Chickadee | 30. Meadowlark | 57. Black and White Warbler |
| 6. English Sparrow | 31. Goldfinch | 58. Vesper Sparrow |
| 7. Junco | 32. Catbird | 59. Ruby-crowned Kinglet |
| 8. Red-bellied Woodpecker | 33. Kingbird | 60. Crane |
| 9. Yellow-bellied Woodpecker | 34. Kingfisher | 61. Maryland Yellowthroat |
| 10. Cardinal | 35. Blue Jay | 62. Red-headed Woodpecker |
| 11. Tree Sparrow | 36. Towhee | 63. White-eyed Vireo |
| 12. Mocking-bird | 37. Brown Thrasher | 64. Red-shouldered Hawk |
| 13. Screech Owl | 38. Chipping Sparrow | 65. Yellow-throated Vireo |
| 14. Winter Wren | 39. Orchard Oriole | 66. Black-throated Green Warbler |
| 15. Crow | 40. Song Sparrow | 67. Myrtle Warbler |
| 16. Turkey Vulture | 41. Least Flycatcher | 68. Red-eyed Vireo |
| 17. Bob-white | 42. Nighthawk | 69. Palm Warbler |
| 18. Sparrow Hawk | 43. Baltimore Oriole | 70. Black-throated Blue Warbler |
| 19. Loggerhead Shrike | 44. Semipalmated Sandpiper | 71. White-throated Sparrow |
| 20. Red-tailed Hawk | 45. Barn Swallow | 72. White-crowned Sparrow |
| 21. Robin | 46. Starling | 73. Carolina Wren [row |
| 22. Bronzed Grackle | 47. Yellow Warbler | |
| 23. Bluebird | 48. Phoebe | |
| 24. House Wren | 49. Indigo Bunting | |
| 25. Killdeer | 50. Yellow-billed Cuckoo | |
| | 51. Yellow-breasted Chat | |
| | 52. Hermit Thrush | |

BIRDS THAT HAVE BUILT THEIR NESTS ON OUR PLACE IN THE YEAR 1918:

- | | |
|--|--|
| 1. Bluebird in bird-box on post. | 11. Robin built in apple tree. |
| 2. Robin built in hawthorn tree. | 12. House Wren built in bird-box on post. |
| 3. Song Sparrow built on ground in garden. | 13. Chipping Sparrow built in currant bush. |
| 4. Blackbird built in damson tree. | 14. Blackbird built in elm tree. |
| 5. Blackbird built in pear tree. | 15. English Sparrow built in cornice of house. |
| 6. English Sparrow built under eaves of house. | 16. Song Sparrow built in brush-pile. |
| 7. English Sparrow built under eaves of house. | 17. Baltimore Oriole built in walnut tree. |
| 8. Song Sparrow built on ground in pasture. | 18. Song Sparrow built in honeysuckle. |
| 9. Blackbird built in apple tree. | 19. Chimney Swift built in chimney. |
| 10. Robin built in apple tree. | 20. Blackbird built in walnut tree. |
| | 21. Robin built in elm tree. |
| | 22. Robin built in locust tree. |

- | | |
|---|------------------------------------|
| 23. Robin built in apple tree. | 29. Cardinal built in grape arbor. |
| 24. Catbird built in walnut tree. | 30. Catbird built in apple tree. |
| 25. Least Flycatcher built in apple tree. | 31. Wren built in bird-box. |
| 26. English Sparrow built in cornice. | 32. Cardinal built in apple tree. |
| 27. Robin built in wild cherry tree. | 33. Catbird built in honeysuckle. |
| 28. Catbird built in damson tree. | |

ACCIDENTS HAPPENING TO BIRDS

1. I found a Catbird in a large, high tub that the cattle drink from. This bird had only one leg. It had come to the tub to drink, could not balance itself on the side of the tub, and fell in and drowned.

2. We found a male Baltimore Oriole hung in the nest it was building in one of our walnut trees.

3. I was down at our pond one evening watching two Snipes feeding around the edges of the pond. Suddenly one flew up, and flew against a telephone wire, and dropped in the road. I ran and picked it up. I thought it was dead, but when I got home with it it could walk. We left it in a pen with no top over it so it might fly away if it could. We took it to the pond every day and it would eat. I found it Monday evening, and it died Thursday night. It could run and swim very fast. It must have hurt its wings for it never flew at all. After looking it up I learned it was a Semipalmated Sandpiper.

[No habit is more valuable for the student of birds to acquire than that of keeping regular notes. It is only by so doing that one can speak with certainty of past observations which may at any time become of interest to one's self or to others.—J. T. N.]

THE WHITE-CROWNED SPARROW

The White-throated Sparrow is a familiar fall and winter bird, but how many of BIRD-LORE's young readers are familiar with its handsome relative, the White-crowned Sparrow? In the east the White-crowned Sparrow is rare, one of the prizes of migration, which may be looked for for years before it is satisfactorily seen and identified. In the west where the White-throated Sparrow does not occur, the White-crowned is more abundant, and there are three geographic races of it recognized. See what Dr. Frank M. Chapman has to say of the song of this bird, speaking of one of its South American relatives elsewhere in this issue of BIRD-LORE.



WHITE-CROWNED SPARROW
Photographed May 4, by C. W. Leister, Ithaca, N. Y.

LEAST BITTERN

By T. GILBERT PEARSON

The National Association of Audubon Societies

EDUCATIONAL LEAFLET NO. 98

One morning, early in May, I pushed an old flat-bottomed boat through the reeds growing along the shore of a shallow southern lake until reaching an open place, I dropped my baited hook among the lily-pads. The sun had but recently risen, and the plant-life on every hand was glistening with dew. The morning was very still, and the squawk of a slow-flying Heron came distinctly

across the water from a distance of a quarter of a mile. On a nearby bush a Red-winged Blackbird balanced and saluted with song the new day. *Kong-quer-ree, kong-quer-ree*, came his musical voice over and over again. In the woods along the shore Cardinals called incessantly, and a Carolina Wren threw to the air a tempest of melody. A Woodpecker somewhere was tapping on a dead limb, and a Fish Crow flew over without a sound.

It was good to be on this quiet lake, where no farmhouse was within sight and into whose solitude the shriek of a locomotive whistle never entered. While sitting here enjoying the tranquil surroundings, I suddenly noticed a movement among the tops of a clump of rushes, perhaps fifty feet away. Three or four of them appeared to be swaying ever so gently, and yet they surely were in motion. A moment later there appeared an object just coming into view from below, indistinct and yet real. It appeared the same color as its surroundings—



FEMALE LEAST BITTERN "FREEZING"
UPON APPROACH OF ENEMY

Photographed by Arthur A. Allen



LEAST BITTERN

Order - HERODIONES
Genus - Ixobrychus

Family - ARDEIDÆ
Species - EXILIS

National Association of Audubon Societies



as though a small portion of the denser rush clump had quietly moved upward into view. And then, as I gazed, the motion of the reeds ceased and the object blended with the reed stalks and disappeared. Puzzled and curious, I waited, but nothing more happened. Laying my fishing-pole on the lily-pads, I picked up the paddle and slowly and cautiously pushed the boat forward. Not until the prow of the boat came to a stop within 5 feet of the spot I was so intently watching were my eyes able to again outline the yellowish brown mass whose movements I had watched a few moments before. Grasping the stem of a stalwart reed, with body erect and long bill pointed skyward, there stood a bird, silent and motionless as the rushes around it. Can any bird of the wilderness, by remaining motionless, be better hidden in its surroundings than the Least Bittern? If so, I have yet to meet it. After watching my neighbor for a minute, or two, I slowly arose and started toward the front end of the boat. At this, the bird lowered its head and, with one bound, sprang from its hiding. The instant for flight had come; the light yellow eyes gazing at me from either side of its upturned bill had told it that its deception had been discovered, that a probable enemy was fast approaching.

With dangling legs and labored beating of wings the bird flew over the reeds, much as young birds fly, and, looking at it for the first time, one might expect it to fall from sheer weakness. However, the flight soon became stronger, and, stretching its legs out straight behind, it was soon going with ease and at a fairly rapid rate. Three hundred yards away it dropped from sight among the rushes and was seen no more.

Turning to look again at the cluster of rushes from which the bird had flown, I discovered its nest—a large, double handful of rush leaves and water grasses, perhaps eight inches across the top. It was held in place by the surrounding rushes and was supported by a mass of the previous year's growth that had died and were bent down. In the slightly depressed top lay four pale blue eggs about an inch and a quarter in length. No wonder the bird wanted to hide, perhaps feeling that when it flew its treasures might be revealed. Later in the day I again visited the nest and found the bird at home, or, as I have always believed, the mate of the one that was there in the morning, for its behavior was totally different. As I approached, instead of raising its bill as if in silent supplication to heaven, and 'freezing' as still and rigid as the rushes about it, it merely squatted low, spreading its wings as if to shield the nest from view. With the feathers of its neck raised and head drawn back in a threatening attitude, it showed clearly its anxiety and willingness to strike if the intruder upon its solitary domain should approach too closely. That it was quite capable of doing this was quickly shown when, upon reaching out my hand, that sharp and strong beak made a vicious stroke which, had the blow gone home, would most assuredly have drawn blood.

Sixteen days are required for the eggs of the Least Bittern to hatch, but long before this period had passed my duties had taken me elsewhere, and I

was not to see the babies in their cradle, or ever to learn whether they escaped the dangers that beset the little wild birds that begin life in the marsh.

Another time, in a distant state, I again invaded the haunts of the Least Bittern. I came upon three young birds, in a bush, that probably were only a day or two out of the nest. Evidently, they had traveled some distance from the place of their hatching, for there was no shelter within a hundred yards where the nest could have been concealed, and all search failed to reveal it. I was passing within five feet of their hiding-place when I discovered them. All were standing perfectly still, with their bodies compressed rigid and upright, and their long necks and bills pointing straight upward. Foolishly, I tried to take one in my hand, and it immediately flew, but either through weakness or some other cause, fell into the water before going far. I picked it up and restored it to the bush, but it at once attempted to escape, this time falling almost at once. Fearing that by repeated annoyance the bird might overdo its strength and perhaps drown, I backed the boat slowly away, and in a few minutes had the satisfaction of seeing the young Bittern rejoin its companions on the bush. The other two being wiser, or less frightened perhaps, had made no effort to escape, and, so far as could be seen, had never changed their position since my first intrusion.

There are some birds that seek their living while hopping or flitting in bushes or trees; others as they walk or hop along the ground; some as they circle through the air far above the ground, and still others while swimming on the water or diving below its surface. This Bittern belongs to the family of Herons, and, as is well known, Herons secure their prey by wading in shallow water and striking out with their long, sharp bills. Although a Heron, the Least Bittern does not go fishing in this way. Its body is light and its toes long and flexible. Apparently, it feeds entirely where the water is too deep for the bird to wade. With lowered head and bill extended, it goes through the marsh grass or reeds, grasping first one stalk and then another, as it proceeds just above the water.

The great naturalist, John James Audubon, tells us in his writings about the kind of food this bird eats. He says:

"The food of this bird consists of snails, slugs, tadpoles, or young frogs or water-lizards. In several instances, however, I have found small shrews and field-mice in their stomach. Although more nocturnal than diurnal, it moves a good deal about by day in search of food. About noon, being doubtless much fatigued, they are not infrequently observed standing erect on one foot, and so soundly asleep as to be easily knocked down or even caught by the hand, if cautiously approached."

The Least Bittern is fully 16 inches in length, provided the measurement is made from the tip of the bill to the end of the nail of the long little toe. From tip to tip of its wings, when these are spread, the distance is $1\frac{1}{2}$ feet. It is astonishing how a bird of this size can pass with such ease through the thick

clusters of reeds and rushes among which its life is spent. Audubon, who kept some of them in captivity for a time, found that they could easily pass through a crack only one inch in width, and this without any special effort or evidence of distress on the part of the bird. Like the Rail and some other water birds, it has the power of greatly compressing its body, thus making it thinner than at normal times.

The home of the Least Bittern is in the fresh-water marshes. Rarely, along the Atlantic coast and down along the Gulf of Mexico, I have seen the bird in salt-water marshes, but all search for its nest in these localities has been in vain. One characteristic of the Herons is their habit of coming together in numbers for the purpose of laying their eggs. Very often hundreds, or even thousands, of several different species will be thus congregated. The bird we are discussing, however, does not have this habit. In a growth of buttonwood bushes, in the shallow waters of a small Florida lake, I once found five nests of the Least Bittern within a few yards of one another, but such occurrences, in my opinion, are rare. Usually, the birds seem to prefer to be alone. On a few occasions I have found them nesting in bushes in the midst of a colony of Boat-tailed Grackles, but I suspected that they chose the locality because it seemed especially suitable for their nesting purposes and not because they sought the society of their large black neighbors.

Enemies the Least Bittern certainly has. Water-snakes capture the young and perhaps at times eat the eggs. Muskrats, found in nearly every marsh, are to be dreaded, as are minks and Hawks. Fish Crows are ever on the lookout for eggs and perhaps this is the reason why the birds bend downward the tops of the rushes to shield the eggs from above. The draining of marshes, which thus destroys their feeding and nesting places, has caused these birds to become scarce in many parts of the country.

The Least Bittern ranges over a large part of North America, being found in summer from Oregon and the southern Canadian provinces southward throughout the United States, West Indies, Central America and northern South America. When winter comes, the birds in Canada and the United States retire southward, and none are known to pass the winter north of the region immediately bordering the Gulf Coast.



The Audubon Societies

EXECUTIVE DEPARTMENT

Edited by T. GILBERT PEARSON, Secretary

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FORM OF REQUEST:—I do hereby give and bequeath to the National Association of Audubon Societies for the Protection of Wild Birds and Animals (Incorporated), of the City of New York.

A NATION-WIDE EFFORT TO DESTROY CROWS

The Sporting Powder Division of E. I. du Pont de Nemours and Company has started a movement which it calls the "National Crow Shoot." An eight-page circular, decorated with a drawing by Kalmbach, has been distributed widely throughout the United States, urging the killing of Crows and offering prizes. A bronze lapel button is to be given to every contestant who, during the year 1919, kills twenty-five Crows. There are also first, second, and third "National Prizes" and first and second "State Prizes" offered to contestants of any state in the Union or any province of Canada.

The argument made is that the agriculturists of the country will be far better off if the Crows are killed, and that "It is for this purpose that the National Crow Shoot will be conducted during 1919." For the evident purpose of giving respectability to the circular, a quotation is inserted from Bulletin No. 621 of the Bureau of Biological Survey, in which the author says: "One of the strongest arguments against the Crow," is its destructiveness to "nesting birds of highly beneficial species." The reader is left with the im-

pression that the United States Bureau of Biological Survey condemns the Crow. As a matter of fact, the Government publication referred to is a very exhaustive and certainly fair treatise on the subject. Had the author of this circular been interested in doing justice to the Crow rather than in simply finding arguments against it, he might also have quoted from this same bulletin the following extract:

"The Crow's destruction of insects presents the strongest argument in the bird's favor. Nearly a fifth of the adult Crow's yearly sustenance comes from such sources, and a great part of the insect material is eaten early in spring, a time when the life-cycles of many of the most destructive pests are at their lowest ebb. A little later, nestling Crows appear on the scene, outnumbering their parents two to one, and assist in the work of destruction. Not only do the young birds eat a much larger proportion of insect food than do their parents at the same time of year, but the quantity of food required to develop their rapidly growing bodies is considerably greater. That injurious insects greatly outnumber beneficial insects in the diet of

the Crow will be seen from the following review of the four most important orders. . . ."

Or he might have gone on to the "Conclusion" and quoted this:

"The misdeeds of which the Crow has been convicted greatly outnumber its virtues, but these are not necessarily equal in importance. Much of its damage to crops and poultry can be prevented, while the bird's services in the control of insect pests can ill be spared. At the same time, no policy can be recommended which would allow the Crow to become so numerous that its shortcomings would be greatly accentuated. As the capabilities of the Crow for both good and harm are great, it is believed that an extermination of the species would have ultimate consequences no less serious than an overabundance."

He could hardly, however, have been expected to quote the very last statement in the bulletin which reads as follows:

"Bounties cannot be recommended; neither can a campaign of wholesale destruction where complete extermination is the object sought. However, a reasonable reduction of numbers is justifiable in areas where there is an overabundance of the birds. The attitude of the individual farmer toward the Crow should be one of toleration when no serious losses are suffered, rather than one of uncompromising antagonism resulting in the unwarranted destruction of these birds which at times are most valuable aids to man."

It may be remarked incidentally in passing that it is understood that the Powder Company that originated and is fostering this movement advises dealers in sporting goods to encourage the killing of Crows as it means an increased sale of cartridges. This office has received these circulars from various sections and has noticed the extensive publicity which has been given with a view of encouraging the undertaking. We have also received various complaints regarding local shoots that this circular has inspired. For example, under date of April 19, 1919, a gentleman at Rapidan, Minn., writes:

"So-called sportsmen and other persons have organized at Mankato, Minn., with the point in view of killing off Crows, Blackbirds, and certain Owls and Hawks. They have offered 10 cents per Crow's head. The Crows cannot last long, for boys will go out and rob the nests of young ones at this price. The Crows do very little harm here. The Hawks and Owls that have a price on their heads are either beneficial or so rare as to do very little harm. If you can do something about this, do it."

So it seems that the Crow tribe is to be slaughtered. There is no law, either state or Federal, protecting the Crow, and there appears to be a sentiment in many quarters that the Crow is a bad actor, and the world would be better off if the last member of his tribe should be gathered to his ancestors.

Nevertheless, there are those who entertain the feeling that possibly the Crow is not so black as he is painted, and that he possesses certain beneficial qualities and has his part to play in the great economy of nature. Personally, I have always liked the Crow, who is not only very astute, but his presence often gives life to an otherwise barren winter landscape. If the Crows should all disappear, I, for one, would miss them. I would not have every Crow killed any more than I would every Hummingbird or gray wolf or shark in the ocean. To some of us it seems a calamity that the last Dodo, Great Auk, Passenger Pigeon, or even the great *Dinornis* should have passed away. With the departure of each species of wild life the world loses something of its charm.

This nation has existed and been fairly prosperous for over one hundred and forty years with the Crows in our woods or decorating our fields, their numbers, on the whole, being kept within reasonable bounds in most localities by the usual destructive agencies. Why the necessity for this sudden nation-wide effort to kill them? Is the motive back of the enterprise a desire on the part of a commercial interest to continue the sale of powder now that the demand for this commodity across the

seas has been so largely reduced? One is constrained to answer this question in the affirmative after reading number three of the "Conditions of the Contest" which the E. I. duPont de Nemours and Company's circular puts forth, and which reads as follows: "To receive credit in the contest,

Crows must be killed with shot-gun or rifle." In other words, the E. I. duPont de Nemours and Company, while very solicitous to protect the farmers' crops from the ravages of the Crows, will award prizes for dead Crows only if they have been killed by the use of gun-powder!

THE EAGLE LAW OF ALASKA

In response to a letter from this office to Governor Thomas Riggs, Jr., urging the repeal of the law in the territory of Alaska, which provides for a bounty of 50 cents on every American Eagle killed, the following answer from him has been received:

"A bill was introduced in the present current Legislature, the object of which was the repeal of the existing law, but failed of passage, it having been shown that the Eagle is very destructive of the game- and fish-supply of the territory, which I think is quite probable, as Eagles have been, and are still, very plentiful. I believe that the bounty should be extended to other predatory birds, namely, Hawks and Owls, which destroy the food birds.

"The Alaska Fish and Game Club has given the question a great deal of study, and it is of the opinion that predatory birds do a great damage to the other wild life of the territory. I am in receipt of a letter from one of my correspondents on the subject of game, in which he states that he recently destroyed an Eagle's aerie which contained the bones of a large number of lambs of the wild mountain sheep."

From another correspondent in Juneau we learn that the number of Eagles killed, for which bounty has been paid by the territory of Alaska, between the dates of April 30, 1917, and April 19, 1919, is 5,600.

Not only did the Territorial Legislature recently refuse to repeal this bounty law, but evidently their stand was approved by the Alaska Fish and Game Club. Our correspondent states that at a meeting of the Club, held during the session of the Legislature, at which the subject was discussed, "Strong opposition was shown (to the Eagle) and a tendency to include Ducks, Gulls, and other aquatic birds, feeding from fish, under the same bounty law as Eagles."

Mr. C. D. Garfield, Secretary of the Alaska Fish and Game Club, who is quoted above, states, however, "During the next two years we shall attempt to gain more knowledge regarding the alleged depredations of the Eagle, so as to be more intelligently advised in the future."

GAME-LAW ENFORCEMENT IN ALABAMA

The following letter was recently received from the Hon. John H. Wallace, Jr., Commissioner, Department of Game and Fish of the state of Alabama:

"It affords me a very great deal of pleasure to advise you that twenty-five individuals, indicted in the United States court at Montgomery, Ala., for violation of the migratory bird-treaty act by killing Doves out of season, have just come for-

ward and entered a plea of guilty. These persons were indicted upon information furnished by me to the United States District Attorney, and their conviction has had a most salutary effect upon the migratory bird situation in Alabama.

"Alabama claims the distinction of having secured more convictions under the migratory bird treaty than all the other states combined."

Suggested Bird Programs

A circular, containing suggestions for bird programs and citations to books, bulletins, magazines, and other literature where material may readily be found, has been prepared by Mrs. Harriet W. Myers, Chairman, Division on Birds, General Federation of Women's Clubs. Most un-

doubtedly the wide distribution which this circular is receiving among the women's organizations of America will greatly stimulate the rendering of bird programs. Copies may be secured upon request, accompanied by postage stamp, if directed to Mrs. Harriet W. Myers, 311 N. Avenue 66, Los Angeles, Calif., or to this office.



CONTENTS OF ITALIAN HUNTER'S GAME-BAG

The photograph here reproduced shows 17 Robins, 1 Thrush, 1 Warbler, 1 Cowbird, and 2 Woodpeckers. All were killed for food by an Italian in Maine. He was arrested by Warden George E. Cushman, of Portland, while picking his birds, and was taken before a United States Court and fined \$25.

Mrs. Marshall Active

The Massachusetts State Grange has for years been doing notable work in connection with encouraging the study and protection of wild birds. The chief power back of this work is Mrs. E. O. Marshall, of New Salem. Every year the State Grange has presented a program which has given benefit and enjoyment to many hundreds of people who were fortunate enough to attend the exercises. This year the function took place at North Easton on Saturday, May 10. It began with a bird-walk at 8 o'clock in the morning. At 9.30 was held a contest for the identification of birds from pictures; at 10 o'clock examination of the State Audubon Society's exhibit of bird-houses and feeding appliances. Demonstrations were made by E. H. Forbush, and music was furnished by the school children. At 10.30 the National Association's moving-picture films of wild birds, made by Herbert K. Job, were shown at Miracle Theatre. A basket lunch was served at noon. Beginning at 1.30 in the Ames Memorial Hall, addresses were made by Leslie R. Smith, Master of the Grange, and Winthrop Packard, of the Audubon Society. The programme concluded with an entertainment by Charles Crawford Gorst, well-known imitator of bird-notes. How splendid it would be if such programs might be rendered in other communities in the United States.

Pittsburgh's Bird-House Contest

A notable bird-box contest has just been concluded by the Pittsburgh (Pa.) *Chronicle-Telegraph*. The Circulation Manager of this paper, Joseph M. Aylward, is a most enthusiastic advocate for the cause of bird-protection. Through the columns of the paper with which he is connected, he has been able to wield wide influence in arousing interest in the subject in Pittsburgh. He is one of the shining disciples of Hon. John M. Phillips, the veteran bird-lover of Pittsburgh. Associated with him is T. Walter Weiseman, who for over a year has been conducting

a most interesting and worth-while department in the *Chronicle-Telegraph* under the heading "Our Native Birds."

The contest, which has recently been closed in Pittsburgh, was open to members of the Junior Audubon Societies and all other young people, especially those of the "Tele" Boys' Bird-House Club, which now numbers in the neighborhood of one thousand members. In the contest more than one thousand bird-houses and feeding stations were entered. Prizes were awarded by the Audubon Society of Western Pennsylvania and the Humane Society. Twenty-three prizes were given, and a vast interest was quickened in the whole subject of bird-study and bird-protection in Pittsburgh and vicinity.

Florida Audubon Bulletin

The Florida Audubon Society has begun the publication of a quarterly bulletin, the first number appearing in April, 1919. In the introductory announcement in reference to it, W. Scott Way, the Secretary, states: "Its purpose is to chronicle the affairs of the Society, report items of interest concerning birds, keep its readers informed as to bird legislation and conservation, and to briefly note the more interesting personal observations of its readers who have a deep or growing interest in wild bird-life."

The bulletin will be sent free to all members of the Florida Audubon Society. This first publication contains an account of the eighteenth annual meeting of the Society, which was held at Winter Park, on March 15, 1919. There are also a number of "Bird Notes," a list of bird lectures recently given by the Secretary, a brief account of the Winter Park Bird Club, a list of new members, notes from the Cocoanut Grove Branch, Miami Audubon Society, the St. Petersburg Branch, and a letter from Mrs. Hanson regarding the conditions in Lee County. Reference is made to the Junior Classes, notes of notable work done by Mrs. E. E. Coulsen, of Leesburg, Federal Game Warden Pacetti, Mrs. Kingsmill Marrs, and others.

THE ROOSEVELT MEMORIAL FOUNTAIN

Contributions for the Roosevelt Memorial Bird Fountain, to be erected perhaps in Washington, D. C., continue to arrive daily. Audubon Societies, sportsmen's organizations, women's clubs, school children, and many others are showing interest in this undertaking. Three sculptors have for some time been at work on designs to submit to the Committee for consideration as the work of art to be chosen. To make an adequate memorial, which will fairly represent the interest which the bird-lovers of the country have in preserving the memory of Theodore Roosevelt, it is estimated that \$100,000 will be needed. All contributions received go directly into the Memorial Fountain Fund. It is hoped that every reader of BIRD-LORE will take some part in bringing this effort to a successful conclusion.

The following contributions received to May 1, 1919, are herewith acknowledged:

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Woman's Club of Knox, Ind.	1 00	Mrs. C. T. Candee	1 00
Dr. Lewis A. Sexton	5 00	W. Roxbury Woman's Club (Mass.)	5 00
Wm. Albert Harbison	10 00	Alexander Alexander	1 00
Dwight L. Graves	1 00	Charles Sumner Bird	25 00
F. M. Ambrose	1 00	George McMaster	2 00
Mrs. F. A. Swezey	1 00	Gifford Pinchot	100 00
Audubon Society of Western, Pa.	10 00	Minnesota Game Protective League	50 00
W. O. Hart	1 00	Warren Coleman	5 00
Louis C. Lafontaine	1 00	Blair County (Minn.) Game, Fish and Forestry Assn.	10 00
Bird Club of Groton, Mass.	10 00	Frank A. Miller	10 00
Norwood Johnston	10 00	Mrs. C. C. Arnold	3 00
Mrs. W. C. Alexander	1 00	Mrs. M. E. Hills	1 00
Woman's Club of Ouray, Col.	2 00	Mrs. G. M. Turner	1 00
Mrs. James E. Greenbaum	10 00	C. C. Rockafellow	1 00
Mrs. A. A. Whittemore	1 00	E. G. Kent	2 00
E. W. Hunter	5 00	W. A. Macpherson, Jr.	1 00
Miss F. A. Roberts	20 00	Current Events Club, Alamosa, Col.	5 00
J. Sanford Barnes	10 00	Detroit Bird Protection Club	2 00
John J. Pierrepont	5 00	V. W. Bates	2 00
Scott G. Harry	2 50	Pierian Club (DeWitt, Iowa)	1 00
Samuel Wadsworth	1 00	Edward R. Warren	1 00
Woman's Civic League (Ind.)	1 00	Kimmerling's Junior Audubon Society	1 19
H. N. Fiske	2 00	A. R. Arvidson	1 00
Birdlovers' Club of Brooklyn	5 00	Fairmount Junior Audubon Society	2 00
A. D. Walker	10 00	Mrs. H. M. Barksdale	25 00
Miss Marie L. Russell	10 00	Coeur D'Alene Women's Club	3 00
William N. Cohen	10 00	Luella and Edith P. Sovereign	2 00
Virginia A. Reynolds	2 00		

The Audubon Societies

211

Pawtucket Woman's Club	\$5 00	Vigo County Bird Club (Ind.)	\$5 00
Mrs. Jacob Hittmyer	2 50	Jessie Hoyt Hatch	1 00
Cornelia F. Woolley	25 00	Audubon Club of Franklin Academy and Prattsburgh High School	2 70
Miss Ida M. Lane	3 00	New Century Literary Club (Ind.)	1 00
Ernest Harold Baynes	2 00	John J. Paul	15 00
John Bancroft	10 00	P. S. No. 1, Bayonne, N. J.	5 00
Tourist Club of Cedar Rapids	5 00	Delphi Junior Audubon Club (Ind.)	1 00
Dr. Charles Griffin Plummer	1 00	Dean Evans	1 00
Mr. and Mrs. E. L. Baylies	20 00	Lafayette Civic Club (Mich.)	1 00
Fortnightly Club, Piqua, Ohio	10 00	Bluebird Junior Audubon Club (Neb.)	5 00
Mrs. James M. Hills	10 00	C. T. Jaffray	5 00
Mrs. Brookes Brown	2 00	Mrs. Clara M. Johnson	5 00
Charles S. Horner	5 00	Walter Gray Crump, Jr.	5 00
Miss Mary A. Walker	1 00	Miss Grace Trowbridge Smith	1 00
Woman's Club of Leadville, Col.	10 00	Thursday Fortnightly Club, Ja- maica Plain, Mass.	5 00
Milton Klein	1 00	Miss Mary E. Smith	2 00
West Chester Bird Club (Pa.)	10 00	Miss Jessie Ziegler	2 00
Mrs. W. I. Russell	5 00	J. Walter Wood	20 00
Mrs. E. L. Breese Norrie	10 00	J. O. Ballard	2 00
Mr. and Mrs. James R. Poor	2 00	Woman's Club of Greenwood, Ind.	1 00
Arthur L. Carns	5 00	Anonymous	3 00
Mrs. I. O. Boyd	10 00	Names Withheld	11 25
Woman's Club of Seymour, Conn.	5 00		
Osceola Field Club (Wis.)	1 00		
Massachusetts Audubon Society	800 00		
George H. Jennings	5 00		
Mrs. A. W. Jamieson	2 00		
St. Joseph Federation of Women's Clubs	15 00		
Dr. F. W. Langdon	1 00		
Elmer Waggoner	1 00		
John H. Child	10 00		
Miss Caroline E. Crane	5 00		
Albert J. Pirie	1 00		
Mrs. Caroline J. Malone	1 00		
E. E. Dow	1 00		
Mrs. H. Godwin	10 00		
Miss Lillian Weatherby	1 00		
Inter-Mountain Chapter of the Cooper Ornithological Club	5 00		
E. H. Parry, Sgt. Sr. Gr.	1 00		
Mrs. Robert C. Black	10 00		
Mabel A. Metcalf-Merwin	5 00		
Mrs. F. M. Metcalf	5 00		
Miss Minnie Davis	1 00		
J. E. Zalles	10 00		
Mrs. C. E. Raymond	5 00		
A. A. Fairnight	1 00		
J. C. Thaw	5 00		
Valparaiso Woman's Club (Ind.)	1 00		
Progress Club (South Bend, Ind.)	1 00		
Charles D. Velie	10 00		
Mrs. M. Bradford Scott	1 00		
"Tele" Boys Bird-House Club (Pa.)	5 00		
Mrs. C. N. Pollock	1 00		
Ernest and Howes Burton	5 00		
Warris K. Bredbury	1 00		
Propylæus Association	1 00		
Parent-Teacher Association (Cal.)	5 00		
Miss Susan Christian	5 00		
Ottomar H. Van Norden	10 00		
Edward A. Hall	5 00		
Mrs. Russell Hawkins	5 00		
		Total	\$11,684 19

Toledo's Bird Day

No doubt as result of the work of bird-protectors which centers around the Toledo Museum of Art, Mayor Cornell Schreiber, of Toledo, has recently made an unusual proclamation. April 4 is Bird and Arbor Day in Ohio, and in this connection Mayor Schreiber gave out this statement:

"It constitutes a penal offense to shoot or in any way molest a useful bird. Bird-fountains will be erected in the public parks by the Welfare Division. Birds are not only beautiful, but they serve a useful purpose in eating the insects that destroy our crops, trees, and flowers.

"I have been assured of support in this bird activity by the Burroughs Society, the Art Museum Bird and Tree Committee, Toledo Girl Scouts, Toledo Humane Society, Toledo Boy Scouts, Museum of Art Nature Study Class, Wild Bird Protective Association, Newsboys' Association, Audubon Society, Dorr Fish and Game Protective Association, and I delegate to each of these organizations to appoint representatives to act in concert in this forward movement."

St. Petersburg's Bird-House Contest

The Audubon Society of St. Petersburg, Fla., collected the prizes and arranged for a bird-house contest to be staged in the Harrison Hardware Company's show window. The bird-houses were made by the boys of the Manual Training Department of the St. Petersburg public schools. There were 129 in all, and the space in front of the windows was so crowded during the three days of the exhibition that many complained the time was too short, as they had not been able to get near enough to view the exhibit. The next year's contest is already arranged and will be of longer duration.

The judges awarded the prizes as follows: For the most practical bird-house, a gold watch, to Henry Lindelie. The money for the watch was given by H. C. Albrecht, Mrs. H. E. Rowe, Winston Branning, Edward McPherson, A. J. Johnson, Advance Art Printery, F. F. Smith, and Mrs. Katherine B. Tippetts. Honorable mention was given Wallace Fishken and Harold Reece. The house showing the best workmanship, prize \$10 in gold, given by T. H. Kards, Manual Training Instructor, went to George Fogarty; honorable mention to Glen Harrod and Charles Knoener. The house most closely imitating nature, prize set of auger bits, given by the Harrison Hardware Company, went to Burnham Hawley; honorable mention to Floyd Sterns and Victor Crook. Most ornamental bird-house, prize Yankee screw-driver, given by Walden Hardware Company, went to Arthur Armstrong; honorable mention to Harold Hjort and Thomas Squires. The birds will act as judges for the \$5 prize in gold offered by the Audubon Society for bird-house first occupied by a bird family.

Several of the bird-houses were sold, the highest price being \$10, which was paid for a thirty-room Martin-house, sold to Mrs. H. E. Rowe, and which she will put up on her lawn in Youngstown, Ohio. Miss Lillian Rusling, Chairman of the

Equal Suffrage Association of Pinellas County, purchased one which was labeled as an 'Equal Suffrage Bird-House' and bore a jingle advocating the same. Dr. Grace Whitford, of the Child-Welfare Department of the State Board of Health, also invested in one to advocate hygiene, even in houses for birds. Many others thus set forth their ideas, and the window became the point of interest to the many tourists in town. The President and Secretary have been busy ever since answering letters and sending suggestions to the four points of the compass, as these tourists return home and tell of the contest. When the tourists return next season, they will see the remaining houses set in the city parks, on the streets, and in the cemeteries, and it will impress them still further that in this way the youth of the land are being educated to the idea of bird-protection as a fundamental point in conservation measures.

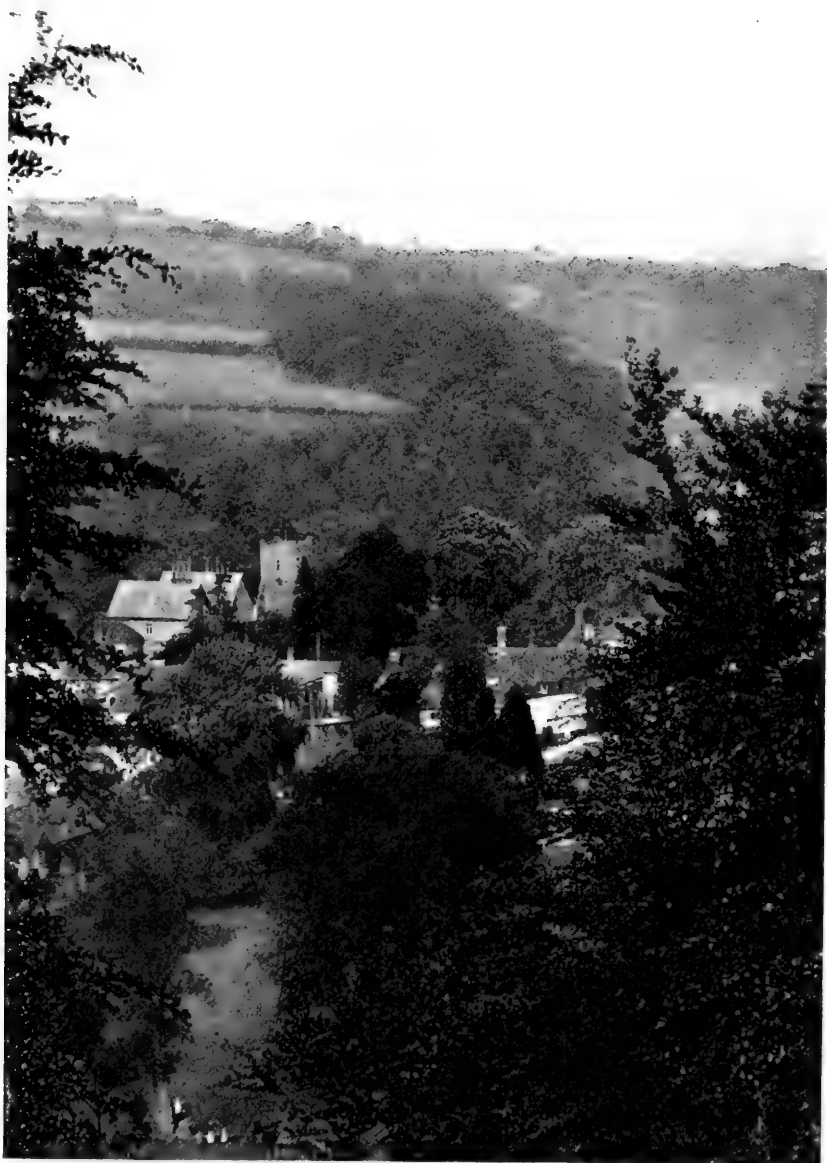
Katherine B. Tippetts, President of the St. Petersburg Audubon Society, has forwarded the above report and speaks with enthusiasm of the widespread interest which the contest has aroused.

Convention of Indiana Audubon Society

The Indiana Audubon Society held its twenty-first annual convention in Kokomo, Thursday and Friday, May 8 and 9. The general subject discussed was the importance of bird-study and the protection of birds, in their relation to the life of man.

Speakers on the program were Dr. Stanley Coulter, of Purdue University, president of the Society; William Watson Woolen and Amos W. Butler, both of Indianapolis; J. J. Mitchell, of Logansport; Oscar Tharp, of Kokomo; Alden H. Hadley, of Monrovia, and Miss Margaret Hanna, of Fort Wayne.

On Friday morning a breakfast tramp and drive was held at the Kokomo Country Club.



SELBORNE FROM THE HANGER

A classic view looking down upon Gilbert White's home, 'The Wakes'. His church is in the middle distance and the oaks shown in a succeeding picture lie just beyond

Bird-Lore

A BI-MONTHLY MAGAZINE
DEVOTED TO THE STUDY AND PROTECTION OF BIRDS
OFFICIAL ORGAN OF THE AUDUBON SOCIETIES

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No. 4

Nature and England

By FRANK M. CHAPMAN
With Photographs by the Author

THE Red Cross mission which has claimed my service for the past eight months, brought me, this past May, to London. England was still returning from the war. The steamer on which I crossed the Channel was crowded with homeward-bound troops; men and women in uniform formed a large proportion of the street population. For years all their energy and practically every activity of their nation had been directly or indirectly devoted toward the winning of the conflict which threatened the freedom of their country. There had been no relaxation in the severity of the struggle; no rest period between campaigns; the war had been one continuous battle. Now, for the first May in five years, England was at peace and her people were free to gratify their desire for recreation without fear of air-raid, or of submarine disaster, and without anxiety for the safety of those at the front.

With no thought whatever of giving even casual attention to the subject, it required only three or four days, including a Saturday and Sunday, to impress upon my mind a vivid picture of a war-weary nation finding its sources of rest, refreshment, and pleasure out-of-doors. Scores were tilling their garden plots. The Thames was alive with punts, rowboats, canoes, and shells; the gardens at Hampton Court and the spacious grounds at Kew were thronged with people who were evidently deriving keen enjoyment from the beauty of their surroundings and from the opportunity they offered for close contact with nature. Hundreds of people strolled slowly over the velvet lawns as though loath to miss a breath of the fragrance of spring or a note from the songs of Chaffinch, Thrush, and Blackbird. Hundreds more were seated beneath the trees or stretched upon the turf in complete abandonment to the sweet and peaceful influences of a sunlit May day. One heard no shouting, no loud talking, no boisterousness; even the most devout nature worshiper could find here no apparent lack of reverence for his temple or his gods.

On a nearby common were rows of occupied tennis-courts and croquet lawns; a small army held the cricket-fields and golf clubs and polo mallets

marked those who were bound for the links or polo-field. Space in the daily press, which in the preceding May was given to ghastly reports of death and destruction, to stories of heroism under fire, was now occupied by cricket, golf, and tennis scores, to praise of the batsman who had made a 'century.' Already the dealers reported that their supplies of racquets, bats, and golf clubs were becoming exhausted and players were urged to "freshen up old stock." But it was not alone his inherent love of sport that called the Briton out-of-doors; nor was it only the sportsman to whom the press appealed. In spite of the demands of world news, the leading London daily found room for a column in praise of the Nightingale's song, the outpouring of a heart which had been stimulated to fervent expression by this most famous of feathered minstrels; while not an issue of this paper was without a tribute to bird, blossom, or season from the pen of some follower of White and Jefferies.

Sunday morning, May 18, I went with a nature-loving companion 30 miles by train to a thinly populated region where extensive commons of field and woodland, hill and dale offered opportunity to renew acquaintance with the common British birds. The season, so far as one could judge from the vegetation, appeared to be about as far advanced as, in normal years, it is about New York City on that date. Apple trees were still in luxuriant bloom; horse-chestnuts, which are so much more abundant in England than in America, were in full blossom; hawthorne was spreading its snowy lines along the pathways and roadside; dry sunny hillsides were yellow with gorse; and in shady places the ground was purple with wild hyacinth. The outlook on every side suggested complete accord between man and his environment. Nature seemed his willing ally in grainfield, pasture, woodland, or garden. And all this charming, friendly landscape found its voice in the songs of birds. Chaffinches expressed its good cheer; Song Thrushes its content; Blackbirds its peace; young Rooks, calling lustily from their nests, its domesticity. The mellow *coo* of Wood Pigeons spoke eloquently of that harmony between human life and bird-life, which permits the existence in numbers in thickly settled places of this fine bird, and emphasized, by contrast of results, our treatment of the Passenger Pigeon. The Moor-hen, essentially like our Florida Gallinule, which we saw on the margin of a small stream, and which one may count on finding in every reed-grown pool in England, further illustrates in its abundance how much more powerful than law is sentiment.

Swallows and Martins, Jackdaws and Starlings made their homes about those of man; there were Robins and Accentors in the hedgerows; Jays, Warblers, Titmice and Nuthatches in the woods.

Lying beneath a hilltop yew we looked out from under its low-spreading branches over a scene where one's every concept of pastoral England found its counterpart. The tolling bells from the church in the village below were echoed in the notes of the Cuckoo calling from the far-distant somewhere, and as a Skylark, mounting heavenward, showered the earth with its ecstatic notes,

I experienced that "serene exaltation of spirit" of which Burroughs long ago wrote on listening to the hymn of the Hermit Thrush.

If, in coming thus far to a comparatively unsettled locality, we had thought to enjoy these enchantments undisturbed, we were not long in discovering that there were others who evidently shared our desire for solitude. The motorists who passed us on the highway, bound for parts unknown, at a speed which forbade attention to much of anything besides the effort to retain their head-gear, were not of our kin; but the cyclists who, pedaling along slowly, had



UNDER THE OAKS AT SELBORNE

time to enjoy the beauties of the wayside, or who left their wheels here and there to enter field and wood in search of flowers or birds, were not riding for exercise alone; and the pedestrians we encountered were evidently desirous of closer contact with Mother Earth than can be had in an automobile. They passed us in such increasing numbers that we sought the quiet of a lane branching from the main road, but, as the morning wore on, this, too, became populous. The further we went afield, the more people we found before us. Every path had its strollers; from the densest copse one heard voices; and by noontide the open fields were thickly dotted with outers.

Some had plant-boxes, some bird-glasses, a few butterfly nets, while by far the larger number carried merely their luncheon; but whatever was the special

object that had called them afield, it was clear that all alike shared the common desire to be out-of-doors. Here was no question of sport; there were no cricket-fields or tennis-courts, nor any attractions other than those offered by nature itself. It was evident, too, that most of these people had not come from the immediately adjacent neighborhood, but from varying distances. They were not merely casual strollers, but were taking a definitely planned outing. And nowhere did I see the disgusting litter which too often in this country marks the lunching-place of 'picknickers' who show their respect for their surroundings by treating them as they would a garbage-dump.

To the impression created by the thousands seen in the parks of London the preceding afternoon was added, therefore, this view of a rural population taking its holiday out-of-doors, and the two experiences combined etched more deeply the lines of the picture of a nation which, in a hundred different ways, was realizing upon its assets in nature. For more than four years it had given unsparingly and effectively of its forces in the world war; now it renewed its strength in those cleansing, purifying influences which, however they may be exerted, find their best expression in fresh air, blue sky, and sparkling water, the majesty of trees, the fragrance of flowers, and the songs of birds. These are the potential heritage of both poor and rich, and the nation which avails itself of these priceless resources need have no fear of the materialistic influences which today darken the horizon of some parts of the world.



THE BEECHES IN THE NEW FOREST

A Pocket Sanctuary

By FAYE RANDLE, Portland, Ore.

"A GARDEN is a lovesome thing," as the old song tells us truly, and though the owner of that formal garden, "Rose plot, fringed pool, ferned grot," might deny the title to the one we had, there was never a more lovesome thing nor one better loved.

A garden of weeds in a ravine does not require seasons of labor nor a knowledge of landscape gardening. The procedure is simple. First, buy or rent your ravine. That is the most difficult task, as it must be a proper ravine, with the brook that made it still flowing through the bottom of it. The one we rented, along with an acre or so of pine woodland and a small brown bungalow, boasted a brook that was all of 3 feet wide, in the widest places, at certain times. The next indispensable thing is a fence to keep out cattle and horses. Our ravine had been pastured for years, and showed it. Barbed wire was cheap, effective, and prompt, so we used it; but if I were getting what I wanted, and hoped to keep, I would choose rail-fences. After you have got your ravine and fenced it off, take a big basket and go gleaning. You will fill it many times with papers, rags, wire, bottles, broken dishes, tin cans, leaky kettles, bottomless pans, and spoutless coffee-pots. Eleven people out of every dozen look upon a ravine, or any sort of hollow in the ground, simply as a most convenient dumping-spot. Break the dead limbs out of the bushes and small trees. Rake the accumulated trash out of the bed of the brook. Tidy the place up a little, but not too much; and then watch it and love it. You will see marvelous things.

Even by June 2, our wild garden, set in the midst of the closely cultivated and pastured Palouse lands, was beautiful to see. By June 3, it was a climbing, sprawling, riotous, pink tangle of wild roses, wild geraniums, and wild peas. A closer look showed that the prevailing pink was underlaid and streaked with gold. There were more than a dozen kinds of yellow flowers in June alone. The sweetest of these golden blossoms, the fragrant buttercups, came in March, and the latest arrivals, the goldenrod, lingered in damp, shady spots until October. There were spring violets and autumn asters, the white radiance of the service-berry blooms, the delicate lavender of the tiny flowers of the brook mint, the dusky blue of larkspur. If this were a story of the flowers of our wild garden I could tell you more—much more.

Out of the buck brush on the slope pops a frowsy Fox Sparrow. He looks as if he had just crawled out of bed; his hair is so tousled, his clothes so mussed. The small frogs sit in the edges of the upper spring and sing lustily. Tiny blue moths flutter above the cowslips. A cotton-tail races up the hill and dives into a brush-pile. A chipmunk runs along his highway through the tops of the smaller pines. Later on, when the service-berries are ripe, he will share them with the Catbirds. If there are a great plenty, we may even get some of the berries ourselves.

The Catbirds were the only residents who disputed my equal rights in the ravine. The others may have thought a good deal, but they never said anything. They either avoided me, or ignored me, or tolerated me. The Catbirds would do none of those things. They were especially ferocious when I chose the stump-seat among the service-berry bushes. The fact that I was usually armed with 'Walden' did not appease them a particle, although I am unalterably persuaded that it should have done so. There might be a moment's peace, then *wo-ow, wo-ow, wo-ow!* here they came, sometimes both, sometimes only one. Inquisitively they tipped their heads and eyed me boldly. Indignantly they jerked their tails, showing the reddish patch beneath. Incessantly they flitted from bush to bush, just out of reach, yelling at me every few moments: *wo-ow, wo-ow, wo-ow!* I forgave them later on, when I found out where the nest had been hidden. I could almost have reached it from where I sat. The next summer, luckily for the nerves of all concerned, the Catbirds built beyond the bridge; and though they still scolded me once in awhile, they had to make a special trip to do it and it was not such a convincing performance.

They would have been much improved if they could have taken a few lessons in good manners from the Black-headed Grosbeaks who built that year in the bushes on the other side of the stump-seat. In the matter of architecture, it is about six of one and half a dozen of the other, but the Grosbeaks are much more agreeable neighbors. The down from the willows was lying thickly on the ground and clinging to the bushes when the Grosbeak nestlings broke through the shells. I had to look twice and see those gaping mouths open wide before I realized that three tiny birds filled the nest, and not willow fluff. I never saw the youngsters after they grew big enough to move around a little. The Grosbeaks were as shy as they were quiet; and they hid the little ones so skilfully in the thicket that finding them would have created more disturbance than I cared to make.

Better luck attended my acquaintance with a Flycatcher family. One summer afternoon I was at leisure to sit still long enough to satisfy the bird propinities. The flowers, the bees, and the butterflies keep right on about their usual affairs under any amount of restless curiosity, but the birds have more reserve. The sun was rather too warm for comfort on the stump, so I sat at the foot of one of the twin pines that stood in the ravine and reached a long way towards the clouds. A clump of willow, service-berry, and wild rose bushes cast a welcome shade. The brook trickled through the bushes and around the roots of the big pine. I did not have the least idea that there were nestlings in the thicket; but when a dainty, Quaker-gray bird, with a slightly raised crest, lit on a willow branch above my head, then popped into the rose bushes, I rolled my eyes and craned my neck in that direction immediately. I have never felt free to take the liberties with birds and their families that some people take. Usually, I do no more than sit tight and hope they won't mind if I stare. This pair of Wright's Flycatchers proved very amiable. They

trusted me to such an extent that they even fed the little ones where I could watch them, after they were out of the nest. They were careful, however, to keep each one in a separate place.

A few days after the Flycatchers had left their summer home, a family of Chickadees came visiting. I was sitting in the same shady spot, feeling rather pensive over the empty nest, when I heard the sweetest, silveriest song over my head: *dee-dee-dee-dee*. I looked up cautiously and there was the jolliest family that ever went on a vacation after a hard summer's work. The five youngsters were able to hunt bugs for themselves, and did so, very busily and happily, but the father and the mother of the family could not break themselves of their old habits very easily. Every little while they flew to one or the other of the youngsters with an extra juicy morsel. It was no wonder the little fellows were so fat. They stayed nearly an hour, and I never enjoyed afternoon callers more in my life.

The Doves usually did their visiting mornings, but they were welcome for all that. Morning after morning, in June, their sweet, trembling notes floated down from the upper branches of the twin pines as softly as the snowflakes in January floated down from the clouds not so very much higher. And like the snowflakes, the Dove notes, one upon another, filled the cup of the ravine until it was running over with beauty.

It was upon a June morning, also, that I first saw our Lazuli Bunting neighbor. One learns to hope for unexpected things in a wild ravine garden on a June morning; but when, my feet deep in wet clover, stepping carefully along the narrow path, trying to keep from brushing the dew off the wild pea vines, stooping low under the willows to save myself a shower-bath, I straightened up and saw before me this gorgeous little bird, the thrill of discovery was as enjoyable as if I had found a specimen new to science. In a moment I saw his mate. She was very soberly dressed, in comparison with the gentleman's fine trappings. That was her only public appearance, but she found shelter and raised her family somewhere in or near our pocket sanctuary I am sure, for nothing else would have kept the dandy hanging around one spot so long. He warbled a little, occasionally, but he was not a fine singer, though he had fine feathers and was a fine bird.

The sweetest bird-song I ever heard in the ravine, or, indeed, anywhere else, was accompanied with the prettiest performance; and it came from the pulsating throat and loving heart of a very plain-feathered bird—the Rusty Song Sparrow. On a spring day I stole, as quietly as possible, down the path that led from the kitchen door. Birds were often bathing or drinking in the pools near the foot of the path, where the brook tumbled over the bare roots of an old stump. Once, at my approach, a bevy of Quail flew up with a whirl of beating wings. This morning, half-way down the path, I stopped suddenly, hearing an unfamiliar song. A moment more and the musician came into view, out of the overhanging bushes, into an open space along the brook. He was a

small brown bird; and so intent was he upon his song that he never saw me at all. As for his dear love, she had neither eyes nor ears for anyone but her sweet singer. He hopped backward before her, pouring out a continual, wonderful melody. She followed, closely, silently. So they passed into the wild rose thicket, out of sight, and gradually out of hearing.

Swallows often came and looped the loop under and over the bridge that crossed the ravine just at the edge of our domain. Robins built as readily in the twin pines as in orchard trees. One pair of Robins raised a brood on a beam under the bridge. The next year a pair foolishly built on a protruding beam, and a cat soon left the feathers of the brooding mother in a pathetic little heap. Young Robins with spotted breasts fluttered in the buck brush on the slopes, and many Robins from the neighborhood resorted to our sanctuary brook for drinks and baths, although the Palouse River was within sight and even within hearing.

We tempted the Mountain Bluebirds to build in the ravine by nailing a box in a tree on the slope, where we could see it from our windows. To our great delight they took the box, and four broods were raised there in two summers. It turned out, however, that this location was only second choice. A rather dilapidated old house in the neighborhood was first choice, when it was not otherwise occupied. The Mountain Bluebirds are as exquisitely, as enchantingly blue as an October sky. They are not the gentlest of birds, however. Ours were inclined to dispute possession of the Wrens' houses with their proper tenants, even after they had proved to themselves, by repeated trials, that the Wrens' doors were too small. The Wrens visited garden, orchard, field, and ravine at their own sweet will. The Chipping Sparrows, with their jaunty little caps of cinnamon-red, were companions in friendliness and usefulness to the Wrens. They came and went to and from their nests in the smaller pines quite openly. The Juncos, nesting on the ground, were naturally much shyer. They are the most trusting of birds at other times, and the flash of their white petticoats from beneath their gray cloaks could be seen in the wild garden on almost any day the whole year round; but they were very careful not to betray their homes. After the youngsters could help themselves a little, they were not so cautious. It was amusing to watch a row of little black-hooded heads pop up above the top of my old stump-seat every time either one of the parent birds flew past me down the hill.

The twin pines lured many visitors besides the Doves. The Meadowlarks delighted to stand on their topmost twigs and pour out their high, sweet, varied melodies. Magpies were both seen and heard there, occasionally. Brewer's Blackbirds chose those trees for their convention hall in the autumn. When the first brown needles began to sift down through their branches, the Nuthatches returned from the mountains and walked upside down all over them, breaking off small bits of bark and dropping them into my eyes, quite carelessly and cheerfully.

Those two big trees were great favorites with the Red-shafted Flickers. Their beautifully engraved trunks were pitted all over with holes that showed where borers had vainly tried to hide their wicked heads. Often, in the summer, I felt the fanning of the wide-spread wings as a Flicker family dashed by. Often, in the winter, the fire-red wings against the snow were at once a challenge and a promise. One winter day I stood between the twin pines, beside the frozen brook. There was a rush of flame; then, like a torch blown out by the wind, a Flicker landed at the base of the nearer tree and began to circle it in ascending spirals. Only two small sparks glowed among his dull feathers, to show the flame was still burning. Over the bridge, singing in notes that chimed like tiny silver bells, fluttered a flock of Chickadees. They swooped down upon the box-elder tree and the slender, bare branches swayed with their activities as if a light wind were blowing. Nothing else moved in the frozen ravine except the Flicker on the pine tree trunk. A soft, cold touch brushed my face, and in a moment there seemed nothing else in the world but motion, as the Christmas snowstorm came whirling from the clouds. I huddled up against the big pine, but after awhile, because the Flicker and the Chickadees had gone away, it was too lonesome down there. As I started to climb out of the ravine I counted up on my fingers:

"The rest of December doesn't matter, because it's Christmas; so there's January, February—that's a short month anyhow—then March! And the buttercups, and Robins, and maybe—maybe—the first Meadowlarks."



A FRIENDLY REDSTART

Photographed by H. W. Osgood, Pittsfield, N. H.



AN ATTRACTIVE BIRD-BATH AT THE HOME OF SADIE E. WILCOX MENDOTA, ILL.

Nip, the Young Sparrow Hawk

By KATE P. and E. W. VIETOR, Brooklyn, N. Y.

DURING the first days of April, 1916, a Sparrow Hawk appeared in our neighborhood, a closely built-up section of Brooklyn, N. Y. His *killy-killy* was often the first sound we heard in the morning, and a high church-steeple was his favorite perch.

On the 13th of the month there were two Sparrow Hawks about, and on the 16th one was seen entering a broken cornice on a house in the next street. This situation was rejected, however, and we never discovered the real nesting-site, but we knew it must be nearby, and several times during May (though the 13th was the only date we noted) we saw a parent bird carry off a fledgling from a colony of English Sparrows' nests in a vine on a house at the rear of our yard.

On July 16 a lady brought us a young Sparrow Hawk which she had found on her doorstep in a nearby street. Excepting for his tail, which was only 3 inches long, he looked fully grown. He was wild and sullen and defiant; drawing himself back as if to strike, he fiercely nipped our hand though his mandibles were too soft to be formidable.

It was Sunday, and there was no raw meat to be had, so we tried to feed him with the yolk of a hard-boiled egg, but though it was easy to put it on his tongue, for his bill was constantly distended, he would not swallow, so we put him under a peach-basket and left him in a darkened room. Peeping through the cracks a little later, we saw him lying on his side, with legs drawn up, and supposed him to be dying, but the next time we looked he was sitting up.

Toward evening we took him out, and, holding him firmly, dropped water from a spoon into his open bill. To our delight he swallowed it eagerly. In this way we managed to wash down a little of the egg-yolk. A berry-crate was substituted for the peach-basket, and he was left alone for the night.

More than half expecting to find him dead, we hurried down next morning, but he was alive and lively. We procured some beef, cut it in bits, and, holding him as before, offered him a bit. He ate it greedily, bit by bit, and as he ate he became docile. We put him back in his improvised cage, but he had tasted freedom, and, fortified with the good beef, soon found his way out and established himself on top of the crate where he sat, quiet and contented, the most of the day. Toward evening he sprang about a foot to a shelf in the extension which had been given up to him, where he sat on a box the second night.

He was now so tame that he would sit on our hand, and although he showed a great aversion to being held, or to having his head touched, he did not object to being fondled, and showed much pleasure in having his back stroked, raising it under the hand, like a cat.

On the third day he adopted a perch, the highest the extension afforded, but often turned his head on one side as though looking for a higher one. Al-

though he would sit for hours at a time on the perch, he would leave it readily if a finger were offered instead, and invited attention by cocking his head on one side and opening his bill; raise a finger and he would nip it gently, and once he climbed on a shoulder and nipped an ear. Altogether one could not wish for a dearer or more interesting pet than was Nip during this time. Indeed so gentle and friendly did he seem, that we had visions of a semi-domesticated Sparrow Hawk who would make our neighborhood his home and keep it free of English Sparrows.



'NIP,' THE TAME SPARROW HAWK

Photographed by Dr. E. W. Viator

Then he was so pretty, with his crown of rufous, tipped with gray, giving a changeable effect; his soft buffy throat and cheeks of the same hue, outlined by black lines; his buffy underparts, streaked with brown on the breast; and his barred back and tail; but the 'eyes' on the inner web of the primaries which in the folded wing formed bars, were the most wonderful thing about his coloring.

After the first day, when he fed many times, he never ate over an ounce of beef a day. We fed him about 8 o'clock in the morning and 5 in the afternoon. He always made a good breakfast, but sometimes refused supper altogether. He showed a decided preference for very fresh meat. He ate daintily and never gourmandized. He

seemed to like water but not to know how to drink; so we sometimes dipped his meat in water. He would not bathe.

On the fourth day he made his first flight, a distance of about 6 feet, and repeated it several times. Toward evening, being taken to the yard, he flew to the fence, and then across the next yard, but readily submitted to capture. Two days later, the door having been left open, he flew to a line in the kitchen, and from that to the top of an open door, the highest in the room. Taken back to his quarters and the door shut, he flew against it so persistently that he ruffled his tail. Later, when he had achieved liberty, this ruffled tail served as a mark of identification. Fearing that he might injure himself severely, we opened the door, when he immediately repeated his flight, first to the line, and

then to the top of the high door, and for the remainder of his stay with us, this was his perch. During the day, he kept to the outside, but as evening approached, he settled near the wall. We never caught him napping; steal down stairs ever so quietly after dusk had fallen, we always found him awake and alert.

During this time, his tail grew a full inch and he began to show signs of restlessness. It was plain that he wanted more space, so, on the morning of July 25, nine days after he came into our possession, we took him to the roof, hoping that we could feed him there until he was able to care for himself.

From the vantage-ground of a chimney, Nip looked at the great world beneath and the great sky above, where even then his parents were sailing, and a wonderful change came over him. For a moment he stood poised with outspread wings, in true Hawk fashion, and we who had been so necessary to his existence and had flattered ourselves that he had repaid us in affection, realized that we were no longer either necessary or desirable to him. The wild nature reasserted itself, and a barrier, intangible but very real, was drawn between us and him. Sadly we left him and went down to the humdrum of civilized life.

An hour later, from the street, we saw him launch forth into the world. Slowly, but straight, he flew over a tree and out of sight, and we thought never to see him again, but, lo, next morning, he was perched on a neighboring chimney, and a series of insistent insect-like notes was traced to him and found to be his hunger-cry, for soon one of the old birds brought breakfast. And for three weeks after his liberation, the following program was daily carried out. Between 9 and 10 o'clock we would hear a clamor from the English Sparrows, and, on looking out, would see Nip on some chimney or coping and hear his hunger-cry. After a time, sometimes soon, an old bird would dash into view, quickly give Nip the quarry, and then from some chimney or the steeple, keep guard while he regaled himself. Usually he was fed again about 5 in the afternoon, but sometimes, either for the sake of discipline or from ill-luck in hunting, he went to bed supperless. We could not often see what the prey was, but once we distinctly saw that it was a full-grown Sparrow.

The last time we saw him fed was on August 13, when, from the screaming of the poor victim, we knew he had been entrusted with a live bird. Next day Nip sat and called a long time but no parent appeared, and we concluded that he had been thrown on his own resources. We never saw him perch on a chimney again, but until well into December, we occasionally got a glimpse of a Sparrow Hawk flying over the roofs and we noticed a decrease in the number of Sparrow pests.



AN OVENBIRD AND ITS NEST
Photographed by H. E. Tuttle

The Night Warbler

By H. E. TUTTLE, Lake Forest, Ill.

“**R**ARELY, rarely comest thou, spirit of delight,” so may we excuse the Oven-bird his oft-repeated daylight roundelay, for his songs of the noon hour are but jingling alliterations beside the floods of ecstasy that he pours forth above the tree-tops in the dark of night. How should he consent to vain repetitions, like the Pharisee, that had sent his song athwart the heavens in wild lyrics of unearthly joy? For “he was taught in Paradise to ease his breast of melodies,” and needs but some dream-sent quickening power to yield increase.

When the starlit nights are warm with the promise of June, then may you hear the first glad upward rush of that far-flung torrent of poetry. Mounting with hurried gladness, as if he feared some surcease of delight, he gains the open sky, spilling the gay notes earthward in his wake, like the tumbling drops of a mountain waterfall. While the last burst of warbled rapture haunts the still air of night, he has sheered into a swift descent, with perhaps a murmured snatch of the refrain, uttered regretfully, as if Lethe had overtaken the singer and hushed the gay chords whilst yet they trembled from his heart.

But with the dawn of day he is again the demure and mincing walker of the forest trails, forgetful of, or choosing to ignore, his midnight revelries. The spell that was on him has been withdrawn, and he returns to the workaday world, like Cinderella to her ashes. He sings with vigorous gaiety, till the woods ring with his song, but neither the words nor the measure is the same: it is a gay song, but it wants art; there is not in it the careless rapture of his moonlit flights. Sometimes, even when the sun is high, he falls into a reverie, perched on a horizontal bough above the glade, then, rarely, and but for a moment, as if in a day-dream, the lyric gift is restored. He darts from his perch like a mad thing, and whips through the woods with incredible speed, singing wildly his flight song with all the abandon of a Bacchante, till, as suddenly, he comes to rest upon the branch from which he started, dozes a space, and wakes to walk quietly the length of his perch, returning to the earth as if quite unconscious of what has occurred.

The cares of the nesting season, though they may scant him in his diurnal pleasures, have no power over the hours of darkness, and if you are wakeful you may hear the aerial love-song of this midnight troubadour, that, forsaking earth, launches himself toward the stars.

Tragedies of the Nest

By L. L. SNYDER, Royal Ontario Museum, Toronto, Ont.

IN looking over my observation notes for the months of June and July, I was very much surprised to find so many casualties which had befallen the birds and their nests in the 'Harcroft' Sanctuary, near Toronto, Ont. This reservation is the property of Mr. J. A. Harvey. It embraces about 25 acres and contains both high and dry woodland and low and wet marshes, which make it attractive to a great variety of birds.

It was here that I had the opportunity of watching bird migration and, later, although rather intermittently, to observe birds nesting. Although many birds had successfully reared their broods on those 25 acres, there were quite a number which met with difficulties or complete failure. No warden protection was given to the Sanctuary, but it was carefully watched over by the two families residing on the grounds. Such helps as shooting stray cats, driving out human molesters, keeping down the harmful Hawks and Owls, as well as having a watchful eye on Crows and Grackles, were constantly in practice.

My list of tragedies starts with the Wilson Thrush or Veery. This master of nature's flute selected a bush-covered bank near the edge of a pond for his deep and well-concealed nest. In a short time the nest was completed, and one morning I found a dazzling greenish blue egg deposited in it. On the following morning I found a Cowbird's egg in the nest. Although young Thrushes are almost as large as young Cowbirds, and could probably hold their own in the same nest, I thought it advisable to remove the egg because of the abundance of Cowbirds in the vicinity. The next day I found the nest empty. Where the Veery egg had gone to (and probably a second egg laid that day), I do not know. On the following day another Veery egg was in the nest. In due time this egg hatched and the little Veery left the nest in the normal way. Although the efforts of the Veery were not all in vain, the brood was not a success.

The second nest which I watched was that of the Chipping Sparrow. It was constructed in a young elm tree about 8 feet from the ground. Three days after I had found this little cradle, which rocked and tossed in the wind, I discovered it tilted up and the few speckled eggs broken on the ground. The wind, very likely, was the cause, as, upon removing the nest, I found that it had been placed between two branches in such a way that, when either branch moved, the movement would tend to loosen their grip on the nest. Birds frequently choose unwise sites for their nests and generally suffer for it, as did the Chipping Sparrow.

The third nest tragedy fell to the lot of our most popular native bird, the American Robin. The pair had built their nest over the dining-room door of Mr. Harvey's house; four eggs were laid and, without anyone noticing it, the eggs disappeared, also the nest was partially destroyed. The pair were not discouraged, but remodeled their home and four more eggs were laid. Four

young Robins finally made their appearance and were thriving when, one day, a black squirrel, which had always been encouraged about the house, turned criminal and proceeded to devastate the home of Mr. and Mrs. Robin. Mrs. Harvey noticed the confusion outside, and, upon investigation, found the black intruder in the act of throwing out the little naked birds. The squirrel had dropped one to the ground and was holding another in his mouth. Just what his intentions were, I do not know, nor did Mr. Harvey wait to see, but promptly frightened the squirrel away and replaced the little birds in their nest. They did not seem to be injured and after several days were fully feathered and started off to learn the art of extracting earthworms from the lawn.



"THE FIVE YOUNG BIRDS . . . WERE BROUGHT TO MR. HARVEY"

Photographed by L. L. Snyder

The next family circle to be broken up was that of a pair of Bluebirds which had nested in a bird-box in the neighborhood. A boy, who wished to try out his rifle, killed the mother bird. The five young birds, which were almost fully fledged, were brought to Mr. Harvey. Mrs. Harvey reared the family upon egg-and-milk custard, a most unusual diet for birds, but, nevertheless, the youngsters did well and were soon able to feed themselves. They were then given their liberty about the lawn, and it is hoped that they will all be back next year.

One day I started out for a walk, armed with my field-glasses and notebook. While going through a cherry thicket, close to the edge of a pond, I caught a glimpse of a tiny yellowish green bird fairly rolling over the ground. It was the female Yellow Warbler. Her frantic efforts to entice me to follow her were of no use, because I wanted to have a look into that little gray cup which was

sure to be somewhere near. After a few moments' search, I found it in the fork of a cherry sprout, about 3 feet from the ground. The sole occupant of the nest was a fat, lazy Cowbird. The details of this story were missing, but it was not hard to see how several little Warblers were crowded off this earth by this clumsy interloper. Other similar cases must have happened in the vicinity, because, on two other occasions, I have witnessed the rather disgusting, but still comical, sight of a tiny mother Warbler, or a Song Sparrow, devoting its entire time to satisfying the enormous appetite of a young Cowbird.

One morning I was asked to locate a Song Sparrow's nest which was somewhere in the vicinity of a thistle patch which Mr. Harvey wished to clear out. A few of the thistles had been cut, but operations had been suspended because of the serious objection of the parent birds. I took my post nearby, being partly concealed by the tall grass and weeds. Both the male and female birds came down, time after time, with their mouths full of small moths and other insects, only to be devoured by themselves after much chirping and shifting of positions. I took this to be bird strategy, and for three hours I sat fighting the mosquitos as best I could without making much commotion. It finally dawned on me that the birds were as much baffled as to the whereabouts of the nest as I was. On first thought I supposed that, because of part of the thistles being cut, the birds had somewhat lost their sense of direction, but it proved that the nest had been overturned. I turned it right side up, but could see nothing of the little birds. With my hand I scratched away the dead leaves and grass, and even the earth, and there, buried in the ground, were the three little birds, still alive, and one egg. My next query was what to do with the young birds since the nest was partially destroyed and the protecting thistles gone. I decided, rather than to move the nest any distance where it would be protected by the weeds, that I should move the protection to it. So I dug up tufts of sod and transplanted them about where the nest had been. Then I remodeled the nest and placed it in a pocket between the tufts of grass. The little birds and the egg were then replaced in the nest. It was only a moment before the parents were feeding the young just as if nothing had happened. The egg proved to be infertile, but the young birds were soon fully feathered and left the nest.

Another Song Sparrow family had an exciting time when they were intruded upon by an otherwise friendly dog. The little Song Sparrows, being now fledged, promptly left the nest, as they had been instinctively taught to do when the dog's sniff sounded too close. The movement, of course, attracted the dog, and she caught one of the little birds. I was hurrying to the scene as fast as I could, but speed was impossible since I was in a rowboat, with a short board for a paddle. My shouts caused the dog to drop the bird and, upon examination, I found an abdominal wound, large enough to allow the bowel to protrude. I took the little Sparrow home and he was immediately placed on the operating table. With a fine silk thread I sewed up the wound and then

washed it with disinfectant. The following day the little fellow was quite active, but refused to take food. I believe it was because he was too old to be fed by a foster parent, because young and more unsophisticated birds unconsciously open their mouths to be fed. After several fruitless attempts to feed him various kinds of insects, I decided to take him back to his mother. This I did, and she began feeding him at once. Just what the outcome was I do not know, but when I last located him, he seemed perfectly healthy. Whether the silk thread stitches will cause trouble, or whether Nature will discard them, I do not know.

Other cases of destruction, such as the disappearance of the nest and eggs of a Brown Thrasher, add more to my list of bird tragedies. This case, I presume, was due to some passer-by, since the nest was close to a public path, and there are always a few individuals whose eyes are pleased with a collection of birds' eggs dangling on a string.

Although my observations will convey nothing new to the one who studies birds, they record a few more instances of bird tragedies and point out some of the causes. Some of the destructive agencies cannot be overcome, but for that reason we should double our efforts to protect our feathered friends; with interest, care and action, we can vitally aid the birds and, consequently, ourselves and the world in general.

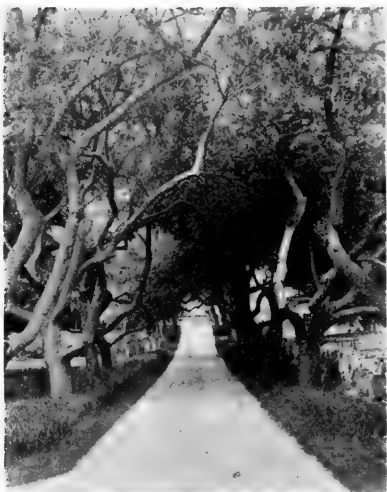


YOUNG SCREECH OWLS

Photographed by C. W. Leister, Ithaca, N. Y.

Bird Neighbors

By MRS. HARVEY C. PERRY, Westerly, R. I.



WHERE FLICKERS LIVED

IT is much easier to have 'bird neighbors' than many of us suspect before we have tried it, and one of the best ways to succeed is to follow the advice given in a little book, 'Methods of Attracting Birds,' by Gilbert H. Trafton. It is not necessary to follow his directions to the letter or to spend much money, as one spring's experience in this New England town has proven. Here we have had trees and nesting-boxes on all sides inhabited, each with its appropriate pair, and, though well within the borders of the town, our back yard and bathing-pool have had daily, and often hourly, visits from such rustics as Meadowlarks and Red-wings.

The first residents were Bluebirds, who appropriated a starch-box covered with bark and which was placed in an old apple tree. For a week there were glorious day-long battles with the English Sparrows, giving occasional need for human interference, when a gallant but tired little gentleman would sit on a twig, confidently congratulating himself and his mate, while the Sparrows, in noisy rout, fled before waving arms and clapping hands.

As soon as building began there was peace and victory—peace, if no Sparrow stopped on or under the tree—and always victory. We have repeatedly seen the fire-eating lord of the family jump directly on a Sparrow's back and drag him from the very door of the house. This lord did no work himself but almost burst with pride and affection at each tiny straw that was brought to the box. And surely such loving lovers there never were. We never found out how many little ones they owned, but we discovered one egg that did not hatch and was the prey of marauding Sparrows after the brood had flown.

For two weeks we thought that we were deserted, but one morning there he was again, the same little fire-eater, darting at the Sparrows and keeping them well away from his old home. He kept with him, for nearly a week, a queer mottled child which he fed most diligently, till it, thankless, left him. But his wife never came back, and for two weeks his call to her was never silent from morning till night. In and out of his old home he went, and into all the other boxes, only to be driven away by indignant owners, and never to find that industrious and exemplary cause of all his happiness. Of course, we will never know what has become of her or of him. Maybe they, or their children,

will come to us next spring. But, in any case, we are glad that his heart-broken calls have ceased to harrow our feelings.

In the meantime, there was domesticity on all sides. A joyous, noisy Flicker had found his box, and, regardless of a Sparrow's nest in the bottom and angry, screaming Sparrows on all sides, calmly took up his abode there every night, and every day used the sides for his drum. We thought he was only an old tramp, till we found he had a wife and family in an apple limb two trees away, and used our box only as an annex. But soon he became overwhelmingly busy with an obstreperous crowd of small replicas of himself, who wanted very much to come out of the hole but never quite dared. They silenced his hurraing shout and made him merely humdrum and business-like, as dull as any com-muter.

A pair of White-breasted Swallows found a home in the hulk of an old toy boat which had been fixed up for Martins, and they were nearly the most amusing of all. The poor flustered bride could never tell which of the four rooms was hers and spent hours of unnecessary labor carrying feathers and straws into all of them, while her husband sat idle but interested on a telephone wire. The hole they had chosen was in the stern, but the prospective mother vacillated long between that and the one in the bow, having succeeded after many failures



THE BLUEBIRDS' HOME

in eliminating the other two. She had made five trips in succession to the wrong hole, always hovering uncertainly before the right one, when her exasperated lord and master, with excited twitterings, called her out and escorted her to the stern. After that we noticed no more mistakes.

It was a slow time till the eggs were hatched, but then slow no longer. We counted twenty feedings in forty minutes, and from occasional observations are inclined to think that this was the rate for most of the day. Both parents

were hard at work now, and not many weeks were passed before the hole was crowded with small white throats and gaping yellow mouths, and then in a few days empty again and Swallows and twitterings were no more.

Since the Swallows had appropriated the Martin-box, there was nothing for it but to build a new eight-room cottage for these hypothetical tenants. This was set up on a pole and promptly occupied by English Sparrows. Every day there was a nest built and every evening it was torn out. Then one day there was a nest and an egg to lose and finally a Sparrow shot; and the next night a pair of Martins actually arrived. After that they came, one by one, the males always first, and a great rejoicing crowd they made, perched all over their house, chattering together, and then starting off on their great tireless swooping flights, playing wonderful games in midair, with feathers or green leaves dropped and caught again, till they were off through the sky and away out of sight.

Soon they were busy with family cares, and the tired mothers would come out in the evenings to gossip and stretch their cramped wings before they were back again at their monotonous duties, while the fathers had a gay time together out over the river catching gnats and dragon-flies.

Last and least came a pair of Wrens and adopted a green-painted chalk-box in a lilac bush by the porch. Of these we knew little except a preposterously loud and cheerful song and an occasional little brown bird which slipped noiselessly into a tiny black hole.

All this had happened by the first of July. The advantages which this place possesses are not unique—old apple trees, nearby water and some shrubbery—yet besides the tenants of our boxes much could be said of Robins and Cat-birds, of Orioles and Kingbirds, of Chippies and Goldfinches and Yellow Warblers and Hummingbirds, some a prey to Sparrows and some to cats, but most, at the last, leading out a victorious brood, working away all their gay spring spirits, but earning again their trip to the South and their fountain of eternal youth.

If any man believeth, let him go and do likewise, and above all let him swear unending hostility to English Sparrows, Starlings, and Cats.



Notes from Field and Study

Notes from Sault Ste. Marie, Mich.

February 17 to May 29, 1916, and from October 22 to May 28, 1917, I had Evening Grosbeaks feeding daily at my feeding-boxes and window-tray. Last winter was a disappointment—only one visit, February 24, from 3 males and a female. This season (1918) they are back. The first, a male, was in the window-tray when I came down to breakfast October 15. October 19, at same time, a female came in, and the same afternoon there were 8. Now, October 28, there are 19, 11 males and 8 females. They are here, as before, every day from just after daylight until mid-afternoon.

Last season a male Junco stayed all winter. This spring he mated, and much to my disgust, on July 8 he and his wife proudly brought to my window-tray and exhibited a young Cowbird!

This is the first year (1918) that I have kept a supply of sunflower seed out all summer. A flock of Purple Finches came March 23 and were here continually until October 21, when they left for the winter. From June 15 until the end of July many young birds were around. Frequently several would be in the window-tray at one time, being fed by their parents. June 30 I noticed the first second-year male beginning to acquire the red plumage, and it was well along in October before all had changed.

June 12 I saw 3 young Pine Siskins, just out of nest, being fed by the old birds, and by June 17th I had a flock of 20 old and young feeding. They stayed until July 15, coming in to feed and wash in the bird-bath daily.

Many White-throated Sparrows and Song Sparrows visited me.

From May 9 to May 23 I had a small flock of 5 White-crowned Sparrows. I have never, thus far, been able to find a White-Crown in this vicinity, except right at my own doorstep. For five years I have

had a small flock, from 4 to 6, for a few days every spring and fall.

A pair of Wood Pewees were around the house all summer. September 17 I saw the old birds feeding four young well able to fly. They must have immediately left for the South as that was the last I saw of them.

April 26 I saw 6 Savannah Sparrows in open fields a quarter-mile from the house; by May 1 there were at least a hundred. They stayed all season and nested. I saw the first young being fed July 10 and many young during the next three weeks. August 4 I noticed the first signs that the birds were flocking; August 6 they were still in the fields. I then left on a fishing-trip, and on my return, August 18, the fields were empty. Two pair of Bobolinks and two or three pair of Meadowlarks nested in the same fields.

Dr. Christofferson, my partner on bird tramps, and myself last fall and winter found birds very scarce in this locality. However, over Washington's Birthday, we had one exceptional trip. With two others we went by train about 40 miles, then, the doctor and I on skis, the others on snow-shoes, packing our provisions, blankets, etc., tramped 8 miles to a hunting-camp. We had the most perfect weather—no wind, bright sunshine, and, during the day, temperature just about freezing or a little above. There was over 2 feet of snow, but when you woke in the morning you were reminded of a balmy spring day, for the forest around was alive with birds singing and chirping. When we first arrived we dug out the woodpile and exposed quite a little patch of unfrozen ground—this was a Mecca for the birds. We also put out a little food on the cabin step and the birds came down to feed.

We had Tree Sparrows, Pine Siskins, Chickadees, Redpolls, Golden-crowned Kinglets, Red-breasted Nuthatches, American and White-winged Crossbills,

and, one morning, a visit for about an hour from a flock of 10 Evening Grosbeaks. The woods all around the camp was alive with Crossbills, flock after flock, not less than 500 in all, the White-winged variety predominating, about two to one, and the males singing most beautifully.

This fall the Doctor and I have been particularly fortunate in checking the unusual for this locality, latitude 46 degrees 30 minutes north.

September 15. A Red-headed Woodpecker. The only one either of us ever saw in this part of Michigan. A Yellow-throated Vireo and two Olive-sided Flycatchers.

September 22.—A Philadelphia Vireo, 2 Wood Pewees, 2 Least Flycatchers and, in a swamp on an island in St. Mary's River, 3 miles from town, 2 Long-billed Marsh Wrens, 2 Swamp Sparrows, and a male and female Maryland Yellow-throat.

September 29.—A Blue-headed Vireo.

October 6.—A Lapland Longspur, 2 Fox Sparrows, 2 Palm, and 2 Black-throated Green Warblers.

October 13.—Two Chipping Sparrows, 3 Hermit Thrushes, 4 Lincoln's Sparrows (extremely rare here), 2 Northern Water-Thrushes (rare here, a very late date, and, I believe, a record for Michigan, the latest previous date I can find being October 8, 1889, near Detroit, 270 miles south of us), 2 Harris's Sparrows (unusual and rare; up to 1912 but three records from the state; however, one of these was from here, and the specimen is now in our High School Museum).

The above date, October 13, was our 'red letter day' for this season. The Lincoln's and Harris's Sparrows and Northern Water-Thrush we picked up along a half-mile of wire fence dividing a stretch of wood and a low-lying, rather wet meadow along the river-bank. The fence was mostly out of sight in the underbrush.

October 16.—A Myrtle Warbler and a Great Blue Heron.

November 13.—A Bohemian Waxwing, the first seen since April 23, 1916, arrived this morning and was feeding in my boxes

with the Evening Grosbeaks.—M. J. MAGEE, *Sault Ste. Marie, Mich.*

Unusual Occurrences in the San Francisco Bay Region

That birds fluctuate in numbers from year to year is so well known that record of unusual local occurrence would be hardly worth while were it not for historic significance. The matter which appears trivial at first sight may become important later when statistics are being compiled.

As a general rule there are few noteworthy variations in abundance among the visiting birds in the San Francisco Bay region. Of course, the Western Robin does not appear in equal numbers from winter to winter and sometimes the Red-breasted Nuthatch appears in such small numbers that it is rarely seen. But seldom are unusual increases or decreases conspicuous to the amateur bird student. The past winter, 1918-19, however, two winter visitant birds which are usually uncommon in the Bay region have appeared in such numbers as to become conspicuous, and one winter visitant, usually fairly common, has been so rare as to be unobserved up to February 10, 1919. The Golden-crowned Kinglet and the Western Bluebird are the two belonging to the first category and the Varied Thrush is the one belonging to the second category. Another notable occurrence remains in our memory—the numerous Western Wood Pewees found on the University Campus, Berkeley, in the summer of 1912 and the dearth of these birds in the same locality since that time. The above occurrences have been so conspicuous as to be noticeable by both professional and amateur bird students.—HAROLD C. BRYANT, *Berkeley, Calif.*

My Neighbor's Back Yard

In view from the south window of my living-room is a half-acre of neglected ground, covered with low shrubbery and a half-dozen plum and apple trees that year

after year bear their meager pittance of fruit which is never gathered. This deserted lot and a low, shambling cottage are the heritage of a lone spinster who is ever alert for trespassing boys, lest they covet a sour plum or a worm-eaten apple—these are left for the birds; they revel by day and the stray cats by night.

This small area, just one mile from the heart of the city, has attracted Black-headed Grosbeaks, Bohemian Waxwings, Western Robins, Red-shafted Flickers, Mountain Chickadee, Ruby-crowned Kinglets, Yellow Warblers, a pair of these birds having bred in this yard for seven years; Townsend's Solitaire, Spurred Towhee, a single Wilson's Warbler, this bird had evidently wandered far out of its geographic range, but it remained in full view sufficiently long to be sure of its identification; a Yellow-breasted Chat; a pair of Rocky Mountain Pine Grosbeaks were noted several times during their breeding season. We have studied these birds in the high mountains where they remain both summer and winter; however, their recurrence led us to the belief that they might be nesting in the pine trees in Liberty Park, about a half-mile distant. Once, when I had thrown out some sunflower seeds, I was pleased to find a lone Crossbill enjoying the feast.

Today, while sitting at my window reading, a shaft of copper distracted my attention. For the moment I thought it was the male of a pair of Robins that returns to us each year, but there was too much bustling and commotion among the low bushes to indicate the presence of my quiet friend, and a more careful scrutiny revealed a male Spurred Towhee. How intensely busy he was; how perfectly oblivious to his surroundings. Soon there was another, and then a third Towhee—such darting to and fro, a moment of repose, then a mad catapulting. It seemed as though the entire dynamic force of the whole bird world was pent up in these three energetic little creatures. It was intensely interesting to watch them scratch for food, using both feet at the same time, jumping forward and back, and

with their little black heads bobbing, it reminded me so much of the negro roustabouts that used to come up the Mississippi on the old lumber scows—the boats unloaded, their joy found vent in singing and jiggling the 'Coonjine' to the strumming of a banjo or perhaps the syncopated rattle of a pair of bones.

For two weeks a male Robin has been singing each morning and evening his praises of the spring returned and calling to his mate to hasten back and join him. This afternoon, as he sat on his high perch on the box-elder tree, he could not long withstand the sight of another bird of copper, brown, and white. He flew to the ground, and I could almost see his disappointment. He stood perplexed, bewildered; he looked down at himself, then at the other bird—yes—the same coloring, but was it of his kin, this nervous, restless creature—no, indeed. I could see his indignation rise as he straightened back his head and puffed out his already corpulent little body—such needless haste to secure one's dinner—his utter disgust was so manifest. He hopped in a semi-circle intently watching the Towhees, then, as much as to say, "Now watch me," he pulled a huge worm out of the soft earth, leisurely eating it piece by piece, but the Towhees did not heed the admonition; they kept right on with their bustling and scratching. Finally one discovered a mass of snow remaining on top of one of the low bushes. Instantly an inspiration had seized him, and he was on top of it. In another second he had shaped a little cavity; then the snow began to fly, left, right and in every direction—oh, such an exciting time, but finally the snow-bath was accomplished—and the entrance of a hungry gray cat dispersed the bird's matinee.—MRS. A. O. TREGANZA, *Salt Lake City, Utah.*

Red Phalarope in Pennsylvania

On Sunday morning, December 15, 1918, a George School student picked up a strange bird which he brought to the school. The bird was still alive but in a

helpless condition and died the same afternoon. The next day, those interested having failed positively to identify it, the bird was sent to the Academy of Natural Sciences at Philadelphia to be stuffed and identified.

It appears that the bird was a Red Phalarope in winter plumage, the first of its species ever recorded in Pennsylvania. The Red Phalarope is an exclusively maritime bird, and this specimen only occurred thus far inland because of two days of foggy and rainy weather during which it had evidently lost its direction.

This specimen, because of its scientific value, will remain in the local collection at the Academy of Natural Sciences, Philadelphia, Pa.—OLNEY RAYMOND, *George School, Bucks Co., Pa.*

A Tardy Evening Grosbeak

A female Evening Grosbeak was seen here May 2, 1919.—JOHN P. YOUNG, *Williamsport, Pa.*

'Crazy' Grouse

I live on the lake-shore, with a small fringe of trees over the bluff between my residence and the lake. As far back as I can remember, there comes a time in the fall, about September 15, when Partridges behave in a very peculiar way. I thought, until this year, that it was due to the breaking up of the covies, or that they were disturbed by hunters at that time, yet this explanation was not entirely satisfactory to me. This year there was no Partridge hunting in our state, but conditions remained the same.

About that time of the year, that is about September 15, I have noticed that Partridges about my residence are very erratic in their flight. I have picked up as many as five in one forenoon that have flown against windows and buildings. I got two one morning that, after having been disturbed, flew against the side of a green, painted barn. I picked up another this fall, a matured bird, that, in a practically open piece of ground, flew

against the side of a summer cottage. I saw the bird do it. This does not happen at any other season of the year. Can you offer any explanation?—A. A. SWINTON, *Charlevoix, Mich.*

[In reply we quote from Seton's 'Wild Animals I Have Known':

"By a strange law of nature, not wholly without parallel among mankind, all Partridges go crazy in the November moon of their first year. They become possessed of a mad hankering to get away somewhere, it does not matter much where. And the wisest of them do all sorts of foolish things at this period. They go drifting perhaps, at speed over the country by night, and are cut in two by wires, or dash into lighthouses, or locomotive headlights. Daylight finds them in all sorts of absurd places—in buildings, in open marshes, perched on telephone wires in a great city, or even on board coasting vessels. The craze seems to be a relic of a by-gone habit of migration, and it has at least one good effect, it breaks up the families and prevents the constant intermarrying, which would surely be fatal to their race. It always takes the young badly their first year, and they may have it again the second fall, for it is very catching; but in the third season it is practically unknown."—EDITOR.]

Starlings Spreading in New York State

From my own observations and from those of my friends here, I have proved that the Starling is beginning to spread toward the east-central part of New York state.

Last spring, for the first time, I was attracted by a new bird-call in an old grove near my home. I could not tell exactly the kind of bird it was, and thought perhaps it might be a Blackbird of some species. Later there were at least a half-dozen of them. They stayed about two weeks and then disappeared. They were very shy and flew before I could get near enough to observe them with my glasses.

I did not think of the Starling, knowing that they were found farther south, nearer

New York City, but later in the summer a bird student about six miles from here shot several Starlings and I was fortunate enough to see one. It quite resembled my visitors in the grove and it made me keen to know whether mine were Starlings or not.

This spring the same birds again returned, and in greater numbers. There must have been twelve or fifteen in all. They were still as shy as ever, and I could get no nearer to them. But one day, near June 1, I had a pleasant and yet not a pleasant discovery. I was attracted to the tree where for two years my Flicker had built his nest. In the same hole one of these black birds (Starlings) was feeding its young. What a squeaking noise, both parent and young made! Now I had a splendid chance to identify my bird. Sure enough my glasses told the story. I could see the metallic green and purple plumage, spotted indistinctly with white. Its breast feathers were not smooth, but as it called each stood out on its breast separately. The tail was blunt and its beak fairly long. Just above this place,

in another tree, was a nest. These were the only trees that were inhabited in the old grove, but I felt very indignant that another pest was added besides the Crow and Sparrow to this charming nesting-site of so many of my bird friends.

I wish heartily that something might be done to stop the spread of these pests up state.—GERTRUDE HOYT, *Hobart, N. Y.*

Making Friends with the Golden-winged Warbler

I am enclosing a picture of a Golden-winged Warbler which may be of interest to the readers of BIRD-LORE.

One day in June, 1918, I discovered a nest of the Golden-wings in a clump of weeds in an open woods near the road. It was somewhat disappointing, however to find that the male would not come near the nest nor attempt to feed the young while my camera was in sight. The female came rather frequently, but she was so excited and cautious that I failed to get her picture.

The next week I found another Golden-



A TRUSTFUL GOLDEN-WING
Photographed by Clinton E. Kellogg

wing's nest hidden under the broad leaf of a skunk cabbage in an open swamp. To my surprise and delight, the male did all the feeding of this family and he seemed not to mind the camera in the least.

Returning a few days later, I found the young birds preparing to leave the nest. I took them up to prevent their escape while I was getting ready for another picture when, to my astonishment and delight, the male came and fed them as they sat in my hand.

Believing that this was as unusual an experience for the Golden-wing, as I am sure it was for me, I send you the picture which I managed to secure.—CLINTON E. KELLOGG, *Secretary-Treasurer, Burroughs Audubon Nature Club, Rochester, N. Y.*

Prothonotary Warbler at Erie, Pa.

The vicinity of Erie, comprising the lake-shore, Presque Isle, commonly known as the Peninsula, and Waldameer Park, is an enchanted paradise for bird-lovers in the Keystone State.

From September 4 to 7, 1918, we spent four days profitably observing and studying bird-life around Erie. The Warbler migration, with its passing 'waves', showed us 23 different species of the Mniotiltidæ.

On September 6, we watched a Prothonotary Warbler feeding on the berries of the 'Devil's Club' tree at the entrance to Waldameer Park. The bird was under extended observation for at least an hour by both of us, with field-glasses, under a strong early afternoon sunlight. This beautiful, well-marked specimen was a gorgeous sight in the bright sunshine, as it lazily devoured the ripe berries. A male Black-throated Blue and several other Warblers were feeding on the same 'Devil's Club' tree about 8 feet above the ground. When we approached within about 15 feet of the birds, the Prothonotary Warbler flew away, but the others allowed a much closer approach before taking alarm. Whereupon we retired, and, after a few minutes, the group of Warblers returned and resumed their feast. We

repeated this many times and studied them with our binoculars from all sides, although glasses were almost unnecessary at such close range. The Prothonotary Warbler drew all our attention on account of its beauty and rarity. We compared it on the spot with Chester Reed's colored plate which does not do the bird justice. Even Ridgway's beautiful colored plate falls short of the real bird.

The intense yellow, nearly an orange, on the whole head and underparts showed it to be seemingly a male bird. The ashy blue color of the wings (without bars) contrasted prettily with the gold. Even the white on the outside tail-feathers was plainly evident. The back of head was not yet washed with dusky, as described by Chapman for the adult male's fall plumage, but the uniform orange-yellow encircled its whole head. This bird might be more aptly named the Golden-headed Warbler.

It was not until after our return, when reading Todd's 'Birds of Erie and Presque Isle' that we realized that we made a first 'observed record' for Erie or vicinity.—THOS. L. MCCONNELL and L. F. SAVAGE, *McKeesport, Pa.*

Townsend's Solitaire

I wish to record a visit of Townsend's Solitaire to this locality on April 11 and 12, 1919. The bird first appeared on the 11th, and was seen by the writer flying about in an old deserted orchard in the foot-hills, but having no glass I could not identify it at the time. The next morning, however, I found it again, this time in my own orchard, and was able to observe it at leisure for more than an hour, making identification absolutely certain. During this time its flights were confined to the orchard and roadside, and a stumpy pasture adjoining. It was feeding constantly, taking its prey in Blue-bird fashion, by watching for it from fence-posts and stumps, and dropping to the ground only when an insect had been located, returning immediately to its point of observation. In fact, in its habits,

and in the general appearance of its head and neck, it constantly reminded one of a female Bluebird, although its longer form suggested a slender Thrush, with a hint in its actions, and especially in flight, of the Sage Thrasher.

When the bird finally left me behind, it flew in the direction of the old orchard where it was first seen, and, later in the day, I again found it there, and spent nearly two hours watching it. Although somewhat timid if approached too closely, it took little notice of my presence as long as I remained quiet and at a little distance. While in the orchard it seemed to feed principally on angle worms, which it secured Robin fashion, except that instead of watching for them from the ground it would drop down upon them from the lower limbs of the fruit trees, returning immediately to its perch. In fact, during the entire time I watched it, I did not see it take more than half a dozen hops along the ground, and I did not hear it utter a single note. Possibly my presence may have had something to do with this cautious silence.

It may be that the birds seen were not the same one, and that several were present, but of this I cannot be certain. The locality where it was observed is in the lower foot-hills of the Cascades, and at an altitude of approximately seven or eight hundred feet.

Of course, it was only a stray, lost in migration, but as I have never seen another such instance recorded, I am inclined to think it a very rare occurrence.
—LESLIE L. HASKIN, *Lebanon, Ore.*

Mockingbird in Connecticut

Saturday afternoon, March 15, the writer was walking along Farmington Avenue in the town of West Hartford, Conn., about 4 miles west of Hartford City Hall. A bird-song of remarkably good quality drew my attention to a nearby back yard. At first I thought it might be a Catbird; later, it very strongly reminded me of the song of the Brown Thrasher; but investigation showed the

singer to be a Mockingbird perched in a small peach tree. He did not sing very much after being discovered, but a few notes were heard. A Robin in a nearby tree attracted his attention and was promptly chased out of the tree, and when last seen the Mocker was flying fast towards Hartford.—GEO. H. GABRIEL, *Hartford, Conn.*

The Nesting of Robins

Having read in March-April BIRD-LORE, Horace W. Wright's article on 'Robins Repeatedly Using the Same Nest,' I submit to 'Notes from Field and Study,' my observations on their nesting during the past three years.

In 1916 we built our cottage on the bluff at Wequetonsing, Mich., and when we arrived at our summer home, the latter part of June, we found it already in possession of three families of Robins, who had taken shelter on the inside ledges of two large pillars at either end of our front veranda and on a similar ledge at the side entrance to our cottage. These nests added greatly to the interest and delight of our newly acquired possession. It proved to be one of our chief pleasures to watch our Robin families at close range during this first summer. Our comings in and our goings out and our many delightful days on our veranda did not seem to disturb our bird friends, and we began to feel that a close companionship existed between us. We looked forward with great pleasure to our second summer, hoping to meet our Robin friends again, but having a family of Wrens in a bird-house swinging in a tree directly in front of our veranda, our attention and interest became divided, for while we delighted in the calls of the Robins and their constant presence with us, yet the lovely songs of the Wrens added much to our summer's pleasure.

As soon as the last birdling had flown from the nests of the Robins (1917), one morning, to our great surprise, we heard the Wrens making a great commotion, attacking and apparently tearing apart the nests of the Robins. Only two of the

nests were thus attacked by the angry little Wrens, who busied themselves for several days carrying away bits of straw, string, and twigs. This last summer (our third year in Michigan) we were curious to know if the Robins would nest again in these nests which had been partially destroyed by the Wrens, and when we arrived on June 27 we found only one of the three nests occupied by Mr. and Mrs. Robin, and, curiously enough, it was the one which had not been attacked by the Wrens. We also discovered that a second nest, constructed mostly of mud, had been built as a sort of second story on top of the nest at the side entrance. If that had been rebuilt and occupied by a Robin family or some other kind of a bird family in the early months, the birds had all flown before our arrival in spring, and it was not occupied again this summer. Unlike her ancestors of the two former summers, Mrs. Robin, who was nesting when we arrived, seemed especially timid and wild, and would never remain on her nest when we were occupying our veranda, nor could she stand the opening and shutting of our front door. As we could not abandon its use, the poor lady Robin abandoned her nest, leaving behind her two unhatched eggs (which we discovered at the end of the season), and started nesting on the opposite end of our veranda in the other unoccupied nest, a bit farther away from our entrance door. Here she raised her little family of four. It is a curious thing that, during the three years that we have been studying Robins, watching their rapidly growing offspring day by day, and seeing them stand with uncertain legs on the very edge of their nest and flutter their tiny wings for exercise, we have never yet seen them make their first flight into the world. We have decided they must take that plunge in the 'wee sma' hours' of the morning, before the inmates of the cottage are awake to frighten them. It was a great disappointment to us that we did not reach our summer home early enough for Wren renters this season, and our lonesome little bird-house, swingin' in the tree-

bough, remained unoccupied all this summer. Next year we hope for Martins and Bluebirds, as we have purchased additional bird-houses for our grounds and have arranged to have them placed earlier in the season. We hope to hear many bird-notes next summer at Minno-to-win Lodge.—GRACE L. S. DYCHE, *Evanston, Ill.*

A Robin's Lament

One dreary, rainy afternoon last week, a beautiful Robin dropped dead on my porch roof. This was about 2 o'clock, and immediately his mate came and stood beside him. She looked and chirped and walked around him for several minutes, then seemed to realize there was something wrong.

She stood guard, as it were, first looking at her mate, then looking away, never leaving nor getting more than 15 inches from him, until 7 o'clock at night. There was a fine drizzling rain falling continually, but she never ceased her vigil nor took a mouthful of food during those five hours.

It seemed such a sad sight and we were so desirous of learning the outcome, that some of the family kept watch continually. At 7 o'clock she flew down to the ground and began getting some supper for herself; and as the rain had ceased, another Robin appeared, and they became very friendly, and after a few minutes flew away together. My small son remarked, "Why, mother, she's forgotten all about her other husband and has gone away with a new one!"—MABEL L. C. BOWES, *Utica, N. Y.*

Bluebird Feeding Its Mate

At no time of the year are the human-like instincts of birds so strikingly developed as in the nesting season. One of the many pretty things not uncommonly done by nesting birds is for the male to bring food to his mate while she sits on her nest. Still this is clearly a case of mere instinct growing out of the necessity of

the situation. In the following incident there was apparently no such necessity. Though I am under the impression of having seen a few other similar acts, in no other case were the details so striking as in this one at Kingston, N. Y., on May 18.

A pair of Bluebirds had a nest in a low, hollow stump on the edge of a pond. From the direction of this stump I saw the dull-colored female fly to an orchard nearby. Alighting on the upper branch of an apple tree, she called repeatedly, using exactly



BLUEBIRD FEEDING ITS MATE
Drawn from nature by Edmund J. Sawyer

the notes of a young Bluebird and imitating perfectly all the fluttering actions of a young bird 'begging' for food. Her mate had been near her in the tree, but he flew away and soon returned with food which he tenderly placed in her open bill, while she continued to flutter and 'beg' for it. After a little while both flew away in the same direction.—EDMUND J. SAWYER, *Watertown, N. Y.*

Notes on Albino Robins

As albino birds of any kind always attract special attention among people, I thought the following notes might be of interest to BIRD-LORE's readers.

In 1917 a partially albino male Robin was seen several times near my home in



AN ALBINISTIC ROBIN
Photographed by E. R. Warren

Colorado Springs, Colo. The bird was first seen March 31 and again on the following day, when I secured a few photographs. Though it was quite tame and permitted a fairly close approach, it was difficult to tell how many white feathers there were. As the picture shows, there was one white feather in the upper part of the tail and one or more were mixed in below, a rather vague statement, but that is as nearly as I

can express it. There was also a round spot $\frac{3}{4}$ to $\frac{3}{8}$ of an inch in diameter on each shoulder. After the above date the bird was seen several times within a radius of 150 yards, until June 23, and then not until September 17, when it made its last appearance for 1917. I was naturally pleased and interested when I saw the bird again March 15, 1918, and it was noted occasionally until May 5, since which time it has not been seen.

During 1918 I saw several other partially albino Robins, and heard of more, including one entirely white bird. One of those that I saw had a number of small white spots all over it, and another a white spot the size of one's thumb-nail in the middle of its back. This also was a male, and was seen a number of times. These occurrences would seem to indicate that there is a family or families of these albinos about the city.—E. R. WARREN, *Colorado Springs, Colo.*

Cardinals and Wrens

This spring, on March 27, a pair of Cardinals began the building of a nest in a weeping mulberry tree. The tree is very low and quite close to the house and one could almost reach the nest through a window at the side of the house. The nest itself was constructed of sticks and small twigs.

On April 12, I discovered one egg in the nest. The egg was white, spotted with brown. The next day there was another egg in the nest and the day after that another. Then the female stayed on the nest.

We often looked out the window and watched them and they grew used to us. I watched the nest closely and on April 26 discovered three young birds in it. Then Father and Mother Cardinal were very busy and excited. The male carried worms to the female who, in turn, fed them to the young birds.

I watched the young birds develop. Often I went to the nest and watched the mother and her little ones. The female always stayed on the nest and did not get

in the least excited when I stood very near it.

The young birds grew fast and soon began to look like their mother. Then, one day, I looked into the nest and, lo, it was empty! It was so sudden that I thought a cat must have eaten them. I listened and heard the short *chip* of the Cardinals, which usually means that something is wrong. I followed the sound to a clump of bushes, and, on a very low branch, I saw the baby birds. The parents were teaching them to fly. I stood near and watched, quietly. The male would fly to a low branch and the female stood by and tried to urge the little ones to try it too. This was repeated again and again.

It grew dark and I could not watch them any longer, but the next afternoon we saw the male and female with the three little ones and they could fly.

So ended happily the history of our Cardinals.

I have three Wren-houses in the yard.

This spring, on May 1, a pair of Wrens began carrying sticks and straw to one of the boxes. One morning I counted the trips of the Wrens to and from the house and they made on the average of five or six a minute.

After a while I noticed a pair in another Wren-house. I discovered it was the same pair. Had they deserted the first nest? I watched. No, they still made frequent trips to the first box.

When there were two eggs in house No. 2 a heavy storm beat upon the box and it was blown to the ground. I opened the box and found the two eggs crushed.

The Wrens then were seen most frequently in house No. 1. Eggs were laid and then I noticed the same pair of Wrens building a nest in another box, which I shall name house No. 3. Soon the eggs in house No. 1 hatched. The little birds were tenderly cared for. House No. 3 was never used any further than the building of the nest.—IRENE M. HERSCHLER, *Worthington, Ohio*.

THE SEASON

XIV. April 15 to June 15, 1919

BOSTON REGION.—A New England spring, anticipated through a winter's season of cold, frequently proves a disappointment, and in many respects this was the case in 1919. A remarkably mild winter was succeeded in late April and most of May, in eastern Massachusetts, by an unusual succession of cold or rainy days with a prevailing east wind causing chilly and cloudy weather. The April migrations, well under way and even advanced for the season in case of some species, were abruptly checked by inclement days in the latter half of the month, culminating in a sharp freeze with a biting northerly gale on April 25 that killed the tender shoots of many trees already started. No doubt many birds suffered from this, though exact information is difficult to obtain. A dead Hermit Thrush, reported from one locality

in southern New Hampshire, seemed to have met its fate through exposure. The usual flight of White-throated Sparrows, due in late April, was extremely small. A few scattering birds were seen, one singing feebly May 6, at Lexington, and a few up to May sixteenth. A late Junco was twice seen at Lexington, once on May 9 and again on the 15th, possibly a left-over from the April flight. A flock of twelve Red Crossbills stopped in some Norway Spruces at the same locality on May 9, perchance returning from the winter's wanderings to the south. Pine Siskins were more in evidence than usual at this season: many small companies up to a dozen individuals were of frequent occurrence till May 18. A considerable flock of Evening Grosbeaks (75 to 100 birds) reported as wintering at Beverly Farms, was last

seen there on May 19. As an aftermath of the winter's abundance, a few Hairy Woodpeckers seem to have settled near the towns. One on the main highway at Arlington attracted attention from passers-by through May on account of his loud and persistent drumming.

As for the usual spring migrants and summer residents, the continuously unfavorable days of May seemed inconducive to marked waves of migration. Most species made their general appearance a few days behind the average time of arrival and came, unobtrusively, in small numbers. On May 15, following a fine, clear day, came the most marked flight, when many species of Warblers, including Blackburnians, and large numbers of Parula, Myrtle, and Magnolia Warblers, swarmed through the trees. The three last continued to be conspicuous for several days. Kingbirds seemed very late in general arrival; the first were noted at Lexington on May 18. The first songs of Wilson's Thrushes were heard the same date, eleven days after the first arrivals. Baltimore Orioles and Rose-breasted Grosbeaks came together in numbers on May 5. A shy Lincoln's Finch was observed at Lexington during parts of the 17th, in the vicinity of a brush-pile, whence, with characteristic caution, it would sally forth into the grass, only to disappear utterly and mysteriously if too closely approached. Noticeable was the small number of Blackpoll Warblers in contrast to their abundance last fall. Yellow-throated Vireos seem nearly gone from our region. Only one singing bird at Lexington was found after covering much open and orchard country. One or two pairs of Warbling Vireos are apparently settled in the old elms of the town, but the species is much less in evidence than it used to be before the extensive spraying of shade trees against insects. Cedar-birds also seem to be very few. It is interesting to find that the Tennessee Warbler, of unusual abundance as a spring migrant the two previous years, was present again this season in small numbers. Singing birds were several times recorded during casual

walks between May 21 and June 1 at Cambridge and Lexington. On the evening of May 29, several small flocks of Nighthawks, numbering eight to twelve birds each, passed over, flying high, steadily, and due north. The local birds that breed on the graveled roof-tops of Boston had arrived all of two weeks earlier. This late migration of Nighthawks, doubtless of more northerly breeding birds, is a usual occurrence here in the last days of May. This year it marked practically the close of the spring migrations.

The local breeding birds are already well started in nesting. Starlings were out of the nest in Cambridge by the middle of May. It is worth recording that they are more noticeable this year in the suburbs north of Boston, as at Arlington and Lexington. As a city bird they are nesting in the very heart of Boston. The Robins and Bronzed Grackles, whose summer roost at Lexington was described last year, were already resorting to it nightly by early May, but, apparently, these were almost all male birds. Probably the females were left to brood the eggs and young. By the middle of June, Robins are already on the wing and many of the earlier breeding species, as Song Sparrows, Bronzed Grackles, and Tree Swallows, have young nearly ready to fly. Early June has proved seasonable as to weather and favorable for the hatching broods.—GLOVER M. ALLEN, *Boston, Mass.*

NEW YORK REGION.—This year the arrival from the south of the arboreal birds, which come when the trees are leafing out, especially transient species, was of much interest. Perhaps, due to the spring being at first advanced and later retarded, some species arrived late and others at unprecedented early dates. Among the latter the Black-poll Warbler is noteworthy, reported the end of April, and many of them arriving as early as the first week of May. Learning of their presence in Central Park, New York City, on May 5, they were looked for carefully at Garden City (though that locality is a

poor one for transient birds, being off any migration route) and the species recorded there on May 6, apparently the earliest date for Long Island. In spite of their early arrival, Blackpolls lingered as late as usual—until the first days of June. In the Englewood, N. J., region B. S. Bowditch noted the House Wren on April 20; Walter Granger the Worm-eating and Kentucky Warblers on May 6; he and Ludlow Griscom found the Cape May Warbler and Olive-backed Thrush May 6; Lincoln's Sparrow, Golden-winged and Tennessee Warblers, May 11. The Golden-winged is one of the rarest spring Warblers there, and all the other dates are exceptionally early. There seem to have been certainly not more than the usual number of May migrants, but more rarities than usual turned up among them. On May 2 there was a Prothonotary Warbler in Central Park. Was it a mere coincidence that this second southern straggler occurred there two weeks or so after the Yellow-throated Warbler reported in the June BIRD-LORE (BIRD-LORE, May-June, 1919, p. 182)? Can any student link these records by a study of southern weather conditions during the migration period? During the spring migration transient Flycatchers were notably scarce.

Eastward on Long Island water-fowl lingered very late. On Moriches Bay the last Golden-eye Duck was seen on April 27; a flock of Pintail on the wing, three or four Green-winged Teal, and a 'Puldu' or American Coot on May 3. On the same date three or four drake Scaup, playing about a Duck on the water, allowed a close enough approach before taking wing to be satisfactorily identified as the Lesser Scaup. It is seldom that one can differentiate the two Scaups with certainty in life. As late as May 24 two drake American Scoters accompanying a duck were observed at the edge of the jutting salt marsh. When we rounded a curve in the marsh and came close upon them, the drakes took wing almost at once, but they would not leave the duck, which seemed little alarmed, splashing in the water, apparently bathing and working

off-shore before our canoe. One actually alighted with her again, and the other circled about until finally she also took wing and the three, close together, flew out over the bay. Three 'wild' Mute Swan have been frequenting the shallows close to the salt marsh behind the beach. It is a fine experience to hear the rush of their great wings as they rise from the water and see them in air, snow-white growing smaller and smaller against the distant sky-line.—J. T. NICHOLS, *New York City*.

PHILADELPHIA REGION.—The temperature for April and May averaged about normal, while the total rainfall exceeded the average by about 3 inches. Rainy days were in order, especially during May yet there was no apparent delay in the migration, most of the migrants arriving according to schedule. An interesting flight of Canada Geese occurred the latter part of April, flocks being reported at several points. Those that came to the writer's notice were a flock of four April 17, and a flock of six April 26.

The presence of more Woodcock in this region than for a number of seasons is very gratifying, two nests with young and a number of individual birds have been recorded.

The Warbler migration was a decided improvement over last spring, but not up to the banner spring migration of 1917, when unusual weather conditions were met with by returning migrants. All the more common Warblers that appeared to be so unusually scarce the spring of 1918 passed through in numbers, and it was possible to get a good list by dint of hard work. The writer and Conrad K. Roland, working together, procured a list of eighty-nine species on May 11. The observers were out from 9 A.M. until 8.30 P.M. and at no time were more than 3 miles from the city limits of Camden, N. J. The Black Tern, King Rail, Sora, Red-backed Sandpiper, Barn Owl; Golden-winged Warbler, and Kentucky Warbler were some of the more unusual birds observed. The Red-backed Sandpiper and the Kentucky

Warbler, which were discovered by Mr. Roland, are the first records the writer has for Camden County, N. J. The Kentucky Warbler, while very common in all the creek valleys of the Pennsylvania side of the Delaware, rarely is found on the New Jersey side, for some unaccountable reason.

An interesting feature of May was the presence here at Camden of an unusual number of shore-birds. Besides the common migrants, such as the Yellow-legs, Solitary Sandpiper, etc., there were observed during the last two weeks of May large flocks of Least and Semi-palmated Sandpipers and a dozen or more Semi-palmated Plovers, and on May 21 a Turnstone and two White-rumped Sandpipers were noted; these, in addition to the Red-backed Sandpiper above mentioned, make a very surprising list of birds for this immediate neighborhood. East and northeast winds, with rain, during the first two weeks of the month are no doubt a contributing factor when accounting for the presence of these birds.

A Holboell's Grebe, noted May 13, and two Yellow-bellied Flycatchers May 25, are uncommon enough to mention.

The last migrants noted were an Olive-backed Thrush, May 30, and a Blackpoll Warbler, June 1.

Mr. Wm. Evans, of Marlton, informed me today (June 6) that up to the present only one Martin had appeared at his Martin-house; and in a recent auto trip through South Jersey he saw many houses but all apparently vacant. Continuous wet weather has no doubt a fatal effect on numbers of Martins.—JULIAN K. POTTER, *Camden, N. J.*

WASHINGTON REGION.—The ornithological situation about Washington during April and May was of considerable interest. Notwithstanding the rather low average temperature, the bird migration was in general somewhat early. The Hooded Warbler broke all previous records by appearing on April 13, on which date it was noted by Mr. A. Wetmore. Its previous earliest record was April 19,

1896. The Nighthawk, of which the previous earliest date was April 19, 1877, was reported on April 18 by Dr. H. H. T. Jackson. In addition to these, many other species came a day or two in advance of their normal arrival, and the following several days ahead: Yellow-throated Warbler, April 6; Chimney Swift, April 7; House Wren, April 10; Whip-poor-will, April 12; Black and White Warbler, April, 12; Bank Swallow, April 13; Yellow-throated Vireo, April 17; Parula Warbler, April 20; Bay-breasted Warbler May 4; Black-billed Cuckoo, May 4.

A few, however, were a little late, such as the Northern Water-thrush, which came on May 3, whereas it should appear on April 28; and the Purple Martin, the arrival of which was noted on April 6, but which normally arrives about March 31.

Most of the winter residents left for the north about their ordinary time, but among the exceptions might be noted the Yellow-bellied Sapsucker, which was observed until May 13, and the Horned Grebe, which was seen on the same date. Both these birds remained thus fully three weeks beyond their usual time of departure.

Birds, on the whole, have been numerous in individuals, fairly so in species, and good records have been made by all-day observers. On May 3 and 4 a very pronounced movement of birds took place, this migration wave bringing during these two days the first arrivals of twenty-seven species, together with a goodly number of individuals of these and others. The height of migration this spring occurred about May 12, but soon thereafter, particularly beyond the 18th of the month, the numbers of transients rapidly diminished, and few remained until the last of May.

It has been a really good season for birds, in fact, not far from what might be considered normal in this region. A number of species were considerably more numerous than usual, some of them surprisingly so. For several days the Scarlet Tanagers were everywhere about the

woods, and the Blackburnian Warbler could be seen almost as ubiquitously. At times the Tennessee Warbler was about the commonest bird in suitable woodland, and in full song. Likewise the Kentucky Warbler, the Blue-winged Warbler, the Golden-winged Warbler, and the Traill Flycatcher, all but the first of which are rather rare about Washington, appeared much more frequently than is ordinarily the case. We note, however, the relative scarcity this spring of the Cape May Warbler and the Gray-cheeked Thrush, both of which have for a number of years past been common during the migration.

This season has been in no sense remarkable for the occurrence of rare birds, as was the spring of 1917, but the Upland Plover at New Alexandria, Va., on April 22, observed by Miss M. T. Cooke; the American Crossbill, reported by Mrs. Chamberlain at Thrifton, Va., April 10; and the Philadelphia Vireo, seen by R. W. Moore at Washington on May 8 are perhaps worthy of mention.

Several years ago a Duck Hawk took up its abode in the high tower of the Postoffice Building in the city of Washington, and at times played havoc with the flocks of domestic Pigeons which frequented the market-place near-by. After various attempts the Hawk was finally killed and since then no Hawk has regularly resorted to this place. On April 30 of the present year, however, H. H. Sheldon saw a Duck Hawk fly from the Postoffice Building, which appears to be the latest spring date of which we have any record.—HARRY C. OBERHOLSER *Biological Survey, Washington, D. C.*

MINNEAPOLIS REGION.—After the promise of an early season in March and the first half of April, the weather turned colder for two or three weeks and the advance of spring was so retarded that the arrival of bird and the blooming of flowers was rather later than usual. A considerable fall of wet snow on April 14 and 15 and freezing temperatures for a night or two following, checked the bird migration for several days. Chilly nights and cool

north winds predominated until the first days of May. May, however, was for the most part a mild and pleasant month, with exceptionally hot weather during the last week, which has continued until the present date. On May 28, the thermometer registered 87°, the highest May record for several years. This very hot weather forced vegetation ahead rapidly and sent the late migrants northward more speedily than usual. Early June has been like midsummer.

The conspicuous feature of the bird migration this spring, as compared with the past few years, has been the appearance of most kinds of birds in such decidedly increased numbers that it has been possible to find those species that were apparently absent in recent years. Viewed as a whole, the migration has been more nearly a normal one than we have had for some time. The various species appeared in the old-time 'waves.' The Warbler migration, for example, approached the conditions of former years and was not the disjointed and disappointing affair of last year. The writer saw twenty-two out of a possible twenty-six species and three of the remaining four were reported by other observers. Only the rare Blue-winged Warbler was not reported. There was a large movement of Tennessee Warblers and the Cape May, Bay-breasted, Wilson's Golden-winged and Blackburnian were present in considerable numbers. Grinnell's Water-Thrush was not seen in the large numbers noted last year.

Water-birds, on the other hand, were rather scarce. The number of most species is steadily decreasing each year. The Killdeer, Black Tern, and Sora are exceptions and still return in something like their old abundance. Ducks in this vicinity were not numerous. However, many Ring-necks passed by between April 13 and May 4. They are always paired when they appear, even though in flocks.

At this writing, the summer conditions as to number of birds is a decided improvement over last year. Most species of land-birds are quite as common as they have been at any time in recent years. But the

Towhee and Oven-bird continue scarce, and the Horned Lark is almost a rarity as compared with earlier times. A strange feature of the present summer is the almost entire absence of Nighthawks hereabouts. Only a single bird has been seen by the writer thus far. A second-year male Orchard Oriole was seen May 30, the first individual of this species that has been noted here for several years. Three Wilson's Phalaropes were found at the Long Meadow Sloughs, 10 miles south of town, on June 4. They are still there and are presumably breeding. This was formerly an abundant nesting bird but these are the first that have been seen in this locality for many years.—THOMAS S. ROBERTS, *University of Minnesota, Minneapolis, Minn.*

KANSAS CITY REGION.—All conditions favorable to traveling birds have combined this spring to make the migration just passed a spectacular one indeed. Meteorological conditions have been ideal; insect food has been abnormally abundant, several larval forms, notably the canker worm, being present in such numbers as to suggest an invasion; and vegetation has been earlier and more luxuriant than for many years. As a result, the bulk of the migrants have been slow in passing, and the straggler of a few species have tarried days beyond their accustomed times of departure.

Tennessee Warblers in thousands, representing unquestionably the major part of the flight, were present until May 23, filling the city parks and boulevards with a bedlam of sharp staccato notes, and stragglers were present until May 28. The spring throngs of this species are normally through passing by the middle of the month, and the latest previous record for the last seen was May 25 (1916). The attraction for these Warblers was evidently the abundant supply of canker worms.

Lincoln's Sparrows were heard in full song during late April, which is not usual in this region. Swarms of migrating Kingbirds, Nighthawks, and Orchard Orioles were noted on the prairie regions of the county on May 2. The Kingbirds and

Orchard Orioles more often go in numbers up the Missouri River bottoms rather than over the higher prairie country of this immediate neighborhood. Two locally rare Warblers, the Sycamore and Magnolia, have been reported on several occasions, the first record of the former being April 28, on which date the Prothonotary was also seen. On May 9, Mourning and Wilson's Warblers were observed, as well as a few scattered flocks of Bobolinks, which, in this region, are rather rare birds.

Cedar Waxwings have noticeably increased in numbers during the past two years, and local students are hoping to find it breeding here at last. A nesting pair of this species has been a desideratum of long standing, since the bird is found here practically throughout the year.

The making of the annual spring horizon resulted this year in breaking the record that has stood since May 9, 1914, when two observers noted 101 species. Eight observers went forth at daylight on May 4, scattering in different directions, determined to find every species present. The day was far from being ideal for field-glass work, as the sky was darkly overcast and showers were intermittent, but migration was well under way and the birds were, for the most part, in full song. While it was unfortunate that several species known to be present failed of record, the grand total of 115 species observed was highly satisfactory. Another attempt on the following Sunday by six observers resulted in a list of 104 species.

The long-awaited decision of Federal Judge Van Valkenberg in the matter of his opinion as to the validity of the Migratory Bird Law is still forthcoming. It will be remembered that this is the heart of the enemy's country.—HARRY HARRIS, *Kansas City, Mo.*

DENVER REGION.—As the writer reviews his notes covering the period now under consideration, he is struck anew by the fact encountered many times in past years that scarcely any two similar seasons in different years show identical bird-migration conditions. The season here has been

rather dry, but our vegetation, depending largely on irrigation, has developed about as usual, and the dry conditions do not seem to have affected the bird-migration. This may not be wholly true, since Gambel's Sparrow lingered about Denver no later than May 11, while the Plumbeous Vireo, which is not at all uncommon here each spring, was seen in the neighborhood of Denver but twice, on May 22 and 24. On the other hand, the Chipping Sparrow reached this region on April 20, which is a fair average between the earliest and latest arrival dates in my notes for this species.

There have been many Lazuli Buntings about the nursery ground of U. S. A. General Hospital No. 21 this spring, and their sprightly song and beautiful plumage have lent unusual charm to the bird-life about this institution. The writer has but one record of Richardson's Merlin occurring about Denver during the spring, and this spring adds another, a single bird

having been detected in the outskirts on May 1, a date not very close to the first record (April 19).

The writer found a Mourning Dove's nest on May 30, with newly hatched young, in the 'foot-hills' near Denver, at an altitude of 6,800 feet, which is very early for that date and altitude; this observation may refute the writer's general idea that this season's unusual warmth and dryness had not affected migration. On the same day that this Dove's nest was found, our party had the happy experience of watching, with naked eye and with glass, an enormous Golden Eagle, soaring overhead for several minutes. The bird was once not more than 500 feet above us, and as it sailed about in the varying circles, without a wing quiver, it was the picture of a huge airplane, banking, and rising, and falling. Even our matter-of-fact company were enthusiastic over this rare and yet remarkable sight.—W. H. BERGTOLD, *Denver, Colo.*



Book News and Reviews

A PRACTICAL HANDBOOK OF BRITISH BIRDS. Edited by H. F. WITHERBY. 8vo. Illustrated with colored plates and numerous text figures. In eighteen parts. Part I, pp. i-xvi, 64; March 3, 1919. Part II, pp. 65-128, April 30, 1919. Price 4s. per part.

The present work differs so radically in character from its numerous predecessors that the authors need make no apology for adding another to the already large list of books on British birds. Mr. Witherby secured the coöperation of E. Hartert, A. C. Jackson, C. Oldham, F. C. R. Jourdain and N. F. Ticehurst, each of whom treats of some department with which he is especially familiar, thereby adding greatly to the authoritativeness of the book as a whole.

The book, unlike most other books in its field, abounds in analytical Keys. There are Keys to Orders, Families, Genera, and Species. The Key to Orders is of the illustrated type which was, we believe first used in ornithology in the reviewer's 'Handbook of Birds of Eastern North America,' and which was originated by Ernest Thompson Seton.

The most distinctive and valuable feature of this work is its descriptions of plumages, mainly by the editor, and which, it is said, are "more complete than any hitherto published in a book on British birds."

The sections on 'Breeding Habits' (by Jourdain) are also admirable and contain in condensed form an amount of information for which one generally searches in vain, such, for instance, as the number of days incubation, when begun, whether by one or both sexes, etc.

The paragraphs on migration (Ticehurst) and distribution (Witherby, Ticehurst, Jourdain, Hartert) are also most satisfactory, but we must confess our disappointment with that part of the work relating to general habits and notes. We have, for example, nearly a page and a half devoted to the plumage of the Starling but only five lines on its general habits

and the single word 'loquacity' is the only one referring to its notes. Only nesting haunts are given, while the stereotyped method of treatment employed appears to have prohibited all reference to the bird as a part of animate nature, in short to the sentiment of ornithology. The book, indeed, is eminently practical, but we fear that the authors have been too modest in calling a work which will apparently fill nearly 1,200 pages and cost about \$18, a 'Handbook.' Unquestionably it will long be the standard source of information on the plumages, migrations, and breeding habits of British birds.—F. M. C.

THE OUTDOOR CLUB. By SAMUEL SCOVILLE, JR. Philadelphia. *The Sunday-School Times*. 12 mo.

This is the story of how a father led his children to nature. We cannot imagine any child who would not like to have joined his 'Band,' as it was called. but we know, alas, many fathers who, even if they desired, could not make such an admirable band-leader as the one who wrote this little volume. Fortunate, indeed, are the children who so soon and so happily come into possession of this heritage in nature. We especially commend this record of joyous days afield to parents.—F. M. C.

The Ornithological Magazines

THE WILSON BULLETIN.—The March issue (Vol. XXXI, No. 1) contains as its leading article an interesting account of the "Food-Birds of the Smith Sound Eskimos" by W. Elmer Ekblaw. Every species, as a matter of fact, is eaten, the Dovekie being the most important, while only a rather hungry Eskimo will eat an Old-Squaw. The author concludes that were it not for the birds and their eggs, the Eskimo's food-supply would often fail them, and the abundance of birds is one of the most important conditions which make life possible in the Northland.

Harry C. Oberholser describes a new

Red-winged Blackbird from Texas, which he calls *megapotamus*. He finds that examples of *Agelaius phoeniceus richmondi* from northeastern Mexico and central southern Texas differ from typical *richmondi* from farther south in that the females are less brownish and both sexes are larger.

In 'Migration Records for Kansas Birds,' Bessie Price Douthitt continues a subject begun in the last December issue. The article is really a very briefly annotated list of the birds of the state, while the migration data for the commonest species are obviously very incomplete. It should serve, however, as a good basis for future field-work, and should stimulate other Kansas bird-lovers to record the necessary additions and corrections. We cannot but doubt, for instance, if the Olive-sided Flycatcher is a rare summer resident, when the data given does not even indicate such a possibility.

The usual general notes conclude the issue. The 'European Widgeon in Lake County' (Ohio), by E. A. Doolittle, is as excellent an example of a sight record, which is brightly written and convincing, as we have seen in a long time. If 'opera glass' students and amateur observers could write in the same style it would greatly decrease the troubles of ornithological editors.—L. G.

THE JOURNAL OF THE MUSEUM OF COMPARATIVE OÖLOGY.—The first number of this new Journal was published on March 26 of this year and consists of 35 pages, illustrated. Officially, this is Numbers 1 and 2 of a periodical "intended eventually to be issued as a Quarterly, but now put out as an Annual."

The Museum of Comparative Oölogy, recently established at Santa Barbara, Calif., with Mr. William Leon Dawson as Director, is devoted to the study of the birds of the world, their nests and eggs. It is the purpose of the institution to become the World's Museum of Birds' Eggs, and to devote itself especially to those problems of ornithology on which the eggs, nests, and nesting habits of birds can throw light.

The present issue of the Journal is taken up mainly with notice of the establishment, purposes, and policies of the Museum. As frontispiece, there is a photographic reproduction of the late Rowland Gibson Hazard, who was very much interested in the enterprise of the Museum, and, on a later page, a short memorial notice of Mr. Hazard, especially as regards his connection with the Museum.

In future issues of this Journal we hope to see valuable contributions to our knowledge of those interesting phases of bird-life which surround the egg: all the interesting instincts and habits of nest-building and nidification, on the one hand, development and care of the young, on the other. It is to be regretted that the pagination in this first issue is spelled out at the bottom of each page instead of plainly set forth in figures at the top, as is customary. There seems to be no value in this novel arrangement, which we trust will not be continued.—J. T. N.

Book News

THE California Fish and Game Commission announces that "Compact nature-study libraries will be placed at those Tahoe resorts which are selected for the state of California nature-study field excursions this summer. The libraries will include books on birds, game birds, wild flowers, trees, and kindred objects. Donated to the state by the California Nature Study League, they will be deposited with the Fish and Game Commission to be thus utilized in the Commission's educational work.

"In addition to this library there will be displayed at each resort where lectures and field-trips are given, a large number of colored plates of birds and mammals. Thus vacationists will be able to increase their fund of information regarding wild life by a study of pictures giving full colors, by specimens and by books giving detailed facts."

We commend this admirable plan to the attention of other fish and game commissions.

Bird-Lore

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Devoted to the Study and Protection of Birds

OFFICIAL ORGAN OF THE AUDUBON SOCIETIES

Edited by FRANK M. CHAPMAN

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Bird-Lore's Motto:

A Bird in the Bush Is Worth Two in the Hand

IN resuming his editorial duties, the Editor gratefully acknowledges the support which he has received from John T. Nichols during the past eight months of BIRD-LORE's existence. A magazine cannot well be taken on prolonged journeys where mail connections are infrequent and uncertain. Nor can it be left at home unless one can find the proper person to whose care it may be committed. The Audubon Departments fortunately were in hands which long have had them in charge, but there were left the 'body' of the magazine, the 'make-up' of the whole, with such allied matters as the annual index, Christmas Bird Census, 'The Season' (Mr. Rogers, to whom we are so deeply indebted for editorial supervision of these departments, being in service), reviews, editorials, and a correspondence which consumes almost more time than all the others put together. No one, we think, who has examined the last four issues of BIRD-LORE will doubt (the present Editor does not) that Mr. Nichols was the 'proper person' for the job he was kind enough to take upon his shoulders, and we are glad to be able to announce that in the course of post-war adjustments he will remain on BIRD-LORE's staff in charge of 'The Season.' Mr. Nichols will also review 'The Auk,' replacing Dr. Dwight who, after years of service, claims the right of retirement, a claim to which we reluctantly accede.

WE observe that in BIRD-LORE for May-June, our predecessor made some pertinent remarks concerning the vernacular or 'common' names of birds. This is a subject in which BIRD-LORE is especially interested, since it is our custom in this magazine to use (except in certain formal cases) only the common names of North American birds, a custom, we may add, for which we have at times been criticized. We maintain, however, that the 'Check-List' of the American Ornithologists' Union supplies us with a standard nomenclature of common as well as of scientific names. The former, indeed, are far more 'standard' than the latter. BIRD-LORE aims to use these common names consistently and we contend that this custom renders unnecessary and pedantic the employment of the scientific name also, except in those comparatively rare cases (e. g. Coot) where the 'Check-List' name may not be in general use.

IN giving only one common name as well as only one scientific name for each species, the authors of the 'Check-List' were not infrequently obliged to choose from many local names and in other cases they arbitrarily replaced long-standing names with others which, in their opinion, were better fitted for the birds in question.

THE latest edition of the 'Check-List' was published in 1910, and it is not too soon, therefore, to ask to what extent their rulings have influenced popular usage. The reply is that it depends largely whether the name in question applies to a widely known bird or to one familiar only to bird students. A library of 'Check-Lists' will not change a 'Peep' or 'Ox-eye' into a Semipalmated Sandpiper, make the 'Quail' universally Bob-white, or the 'Partridge' a Ruffed Grouse. On the other hand, it is only the older ornithologists who remember that the Myrtle Warbler was the Yellow-rump, the Magnolia, the Black and Yellow, or the Yellow Palm Warbler the Yellow Redpoll. Knowledge of the existence of the last-named birds is, as a rule, acquired only from books and they are consequently known by their book names.

The Audubon Societies

SCHOOL DEPARTMENT

We regret extremely to be obliged to announce that continued ill health has forced Mrs. Walter to resign the editorship of this Department. For nine years her helpful editorials and correlated studies have stimulated and directed the labor of teachers of bird-lore throughout the country. It will be exceedingly difficult to find some one who can adequately fill her place.—ED.

THE STUDY OF BIRD-LIFE IN THE SCHOOLS OF NEW JERSEY

Dr. Robert G. Leavitt, instructor in botany and zoölogy in the State Normal School at Trenton, has prepared a pamphlet for the Department of Public Instruction of the state of New Jersey, which teachers everywhere will find of value.

In an introductory 'Foreword,' Calvin N. Kendall, State Commissioner of Education, writes:

"The study of birds has been recognized for a long time as an important feature of public-school work. Large numbers of teachers are interested in it, and their work has been productive of excellent results. It is said that the number of birds is increasing, and this is largely due to efforts teachers have made to give pupils, particularly boys, a higher appreciation of bird-life. It is not necessary to make any argument for the conservation of birds. It has come to be recognized that many birds are of economic value in the raising of crops. An understanding and observation of birds has come to be widely recognized as a means of pleasure and recreation."

Under the heading 'Why We Should Study Birds in All Elementary Schools,' Dr. Leavitt writes (after a statement of the economic value of birds):

"Outdoor activities are a rich source of high pleasure in life. The child is born with a nature, instincts, tastes, potential interests, which have a deep relation and correspondence to the nature, forms, and processes of the world into which he is born. We have no right to cheat the child out of a fair opportunity to enjoy this world of surrounding influences, from which he is entitled by the fact of his birth to draw comfort, inspiration, happiness. The school that does not lead its boys and girls to enjoy outdoor life, to love the sights and sounds of nature, to take pleasure in mountains, woods, trees, flowers, birds, wild animals, the sky and clouds, the stars, the sea—that school is not the ideal school, however well it may teach arithmetic and English. Enjoyment of nature is to be counted among the great durable satisfactions of life.

We must definitely plan to increase the outdoor activities and interests of American people. Here lies for many the road to more bodily and mental health and happiness.

"A third argument for the introduction of bird-study will be appreciated by teachers. To many teachers the bugbear of school-work, the thing that wears until it either kills or hardens, is discipline. The one disagreeable feature of many an otherwise pleasant position is police duty. And discipline often wears on pupils. Whatever, therefore, conduces to pleasant relations between governor and governed and works to improve the conduct of the school should make a strong appeal to teachers from a purely selfish standpoint if from no other."

'Typical Instances of Successful Bird Study,' and a detailed 'Plan of Action' conclude this suggestive and practical little manual.—F. M. C.

FOR AND FROM ADULT AND YOUNG OBSERVERS

STUDYING BIRDS IN MAINE AND NOVA SCOTIA

By NORMAN LEWIS, (Age 14 Years), Hampden, Me.

In the summer of 1913, at the age of nine, I was visiting at my mother's old home in Halifax. While there I was taken to see the Halifax Museum several times. I was so impressed by it that I decided to start a museum of my own. My aunts were cleaning up the house and in the attic they found ten 'Bogotá skins' of birds from Colombia, South America. My grandfather had given an old sea-captain a pair of elk antlers for them. There was also an Amazon Parrot which he had obtained alive from a sailor whose ship lay in the harbor. After it died he had it well mounted. A Barred Owl and some birds' eggs completed the outfit which they gave to me.

I was crazy over my 'museum,' as I called it, and when I got back to Hampden, Maine, the lady next door gave me a mounted Wilson's Snipe, picked up near Boston.

The only egg that survived the journey was that of a Bob-White, but a friend in Hampden gave me several sets, and I found some left-overs in deserted nests. I never robbed a bird's nest.

The next spring—1914—I started studying birds outdoors. There was no one to help me, so I had to go it alone and without any books for reference.

In early September I was given for a birthday present a copy of Reed's 'Land Birds.' I received it joyfully and began to study birds in dead earnest. That was my only equipment but it settled most of my problems. By the end of the year I had identified fifty species of wild birds in the field.

I did not take the book to the woods with me, for I knew every picture in

it, and whenever I saw a new bird I identified it at once or went home and looked it up at the end of the hike.

Hampden is an old-fashioned place with hundred-year-old elms shading the streets and scattered over the fields and along the stream. The general features about here are open fields and hedges, old orchards and wide meadows.

The stream is lined with open woods and thick underbrush. A mile up the stream is the Intervale, a large meadow with dense shrubbery all around.



A SITTING RUFFED GROUSE.—NOTE THE SPREAD TAIL

Photographed by J. H. Lewis at Kineo, Me.

Here I would go nearly every day for a couple of hours or more. Through our orchard, full of Bluebirds, Robins, Song Sparrows, and Chippies, across the fields, where Flickers, Meadowlarks, and Bobolinks abounded, I entered the woods which were always full of Warblers.

The Intervale trail was packed and worn smooth, mostly by my own feet, and led along the edge of the stream. The stream itself was inhabited by Spotted Sandpipers, Great Blue Herons, Bitterns, and others. At the Intervale I often saw a Duck or Grebe. Hawks hung in the sky, and the bushes about the edge of the meadow were full of the smaller birds.

In those days I was frail and delicate and considered a 2- or 3-mile hike enough for a day and was often tired by it. Last summer I hiked 16½ miles in five hours, although I hadn't gone more than 4 miles when I was caught in a thunderstorm. When I arrived home I was soaked to the skin, but I had a rub-down with a rough towel and got into dry clothes and showed no ill effects afterward. I owe my present health and my First-Class Scout badge to my interest in bird-study that kept me tramping the Intervale trail once or twice a day.

Ernest Thompson Seton's 'Two Little Savages' did more to interest me in wild life than any other book. The Boy Scout 'Handbook,' 'Freckles' and some of Long's and Robert's books were among my first natural history books.

That first year I had a hard time of it, but by working hard and sticking to it I managed to make a start in ornithology. I kept a journal that year, filled with notes on the birds and sketches. Looking over it now I can make many corrections, but it is nevertheless something that I would not part with.

That winter I subscribed for BIRD-LORE and got a copy of Reed's 'Water Birds.' The Educational Leaflets of the Audubon Society, bound into a book, and 'Birds Every Child Should Know' completed my library.

During the winter I did a lot of sketching and made many trips into the snow-covered woods where I found Black-capped Chickadees, Red-breasted Nuthatches, and Golden-crowned Kinglets.

In early March the Crows came north. Toward the last of March, rushing water and brown fields began to take the place of the ice and snow. The hill-sides were covered with hundreds of tiny brooks which made walking undesirable. Then the Grackles began to arrive, at first in small flocks and later by the hundreds, to squeak and clatter in the tops of the leafless trees. Robins and Bluebirds appeared in the orchard, pecking away at last year's apples. Song Sparrows tuned up in the alder bushes along the edge of icy brooks. It was a time to be outdoors and on the watch. Some of the arriving migrants were new, and I added them to my list, and many were old friends which I was glad to see again.

I was busy all through the spring, but when August came the mosquitos and flies made the woods unbearable. The woods were also too hot, and few birds were to be seen, so we set out to visit at my uncle's farm near Truro, Nova Scotia.

Our train pulled out of Bangor at 4 o'clock in the morning. I had traveled about a little before, having been born in New Brunswick and lived in Newfoundland and different parts of Nova Scotia and Maine, so it seemed like old times for me to be spinning along over the rails through the gray dawn. Going through New Brunswick in broad daylight I was, of course, at the window I got a glimpse of a Martin-house on a pole and a male and female in the air about it. That was the only time that I ever saw a Martin.

While traveling along I noticed dozens of old friends among the birds and flowers. I also saw the common mallow and bluebell for the first time.

We arrived at Truro late at night. My uncle, who used to meet us with a horse and carriage was waiting now with a 'Ford.' Reeling off the miles toward the old farm in my uncle's car, we could not see much of the surrounding country, but the chill night air, sweeping over the salt marshes and striking us in the face, the bridges, curves, and a few houses seen by the glare of the headlights were all familiar.

Arriving at the house we entered the kitchen, had a warm drink over the fire, and went off to bed. I was awakened in the morning by the noise of a clattering Kingbird outside the window and in five minutes was downstairs ready for breakfast.

The main road coming across the marshes is dotted here and there by solitary farmhouses. Our driveway turns from the main road and climbs a hill. It is shaded by four massive willow trees on either side of the driveway which gives it the name of 'Willow-bank.'

At the bottom of the hill the marsh grass and swale stretch away on either side, but the hillside on the left contains an orchard that is firm and dry.

The old house on the hilltop is covered with five-fingered ivy, or woodbine. Nearby are the workshop, the horse- and cattle-barns and the henhouse. Above the barns are dry hay- and wheat-fields and beyond them the pasture and blueberry patch.

To the left is the road to the old bone-mill, a hundred yards away. The corner of the woods about the old bone-mill is open, save for patches of laurel bushes, and that spot is the haunt of Flickers and Jays.

The old wood-road runs from there into the woods, and, a few days after my arrival, I decided to explore it. I followed the road for a few miles through the mossy, overgrown timber swamp and caught a baby Junco just out of the nest. I saw a pair of Yellow-bellied Flycatchers, and, after following them about for awhile, I returned home. Nighthawks could be seen everywhere flying high over the burned ground that lay in desolate ruin all about, uttering their strange call-note.

Returning to the farmhouse I saw a Bittern flying up from the marsh. The next day I hunted flowers and the day after I saw a Blackburnian Warbler and a Sparrow Hawk for the first time. The next day I saw a pair of Fox Sparrows and heard the male sing in the damp, mossy woods back of the bone-mill.

On rainy days there was no haying to be done and my father and I would lie in the loft in the big barn and watch the Barn Swallows. It was great fun watching the little ones taking their first flights.

I caught a baby Goldfinch down under the willows and decided to explore farther in that direction.

Across the road the marshland was rimmed with dykes to keep out the tide. A little red-mud creek, fringed by long marsh grass, ran down to the big

red-mud river. This creek came from the cool, clean woods, where it was good drinking-water and had maidenhair berries and wood sorrel along its mossy banks. When it entered the pasture it widened, and brook trout were sometimes found in it. Entering the marsh it came into the red-mud region and from there on it was as bright red as the banks that it flowed through.

The marsh was full of Sparrows that I could not name, and an occasional Duck or two flew over. Discovering muskrat tracks on the margin of the creek about the bridge, I kept on down it to the mouth. Here it widened considerably, and I ran across some Least Sandpipers tracing patterns in the mud not far from me.

After that I explored the marsh every day, finding Bitterns, Herons, Ducks, Sandpipers, and other birds that I could not get close enough to to identify. After the day's haying was over, if there was no 'cocking up' by starlight to be done, I would go down to the river and watch the sun set over the marshes. As things were darkening down and the wind was moaning through the tall grass, I could see the Sandpipers and Ducks at home along the river. I watched them as long as there was light and then returned to the cozy fire-side at the farmhouse.

At last, when the time came for us to leave 'Willow-bank,' we got into the 'Ford' and set out. The Barn Swallows circled about us, and I said goodbye to them and we left.

We traveled for several hours through the night, and then, as dawn was breaking, we had a race southward with a flock of Ducks.

As we dashed over the St. John bridge, it was low tide below us, and I saw several Sandpipers.

I saw muskrats swimming the ponds and cardinal flowers blooming along the streams. It made me think that in a few hours I would be finding cardinal flowers along my own stream.

Then we saw a white-tailed doe beside the track, gazing calmly at us over her shoulder. I had seen a buck once, about a quarter of a mile from home, along the stream.

The sights became more and more familiar until in the afternoon we arrived home. Then I started off up the stream. The Intervale grass was cut and taken in and fall was beginning to come. I returned to the Intervale every day, checking off arriving and departing migrants.

Those September and October days, with hazy mornings and bright, cool afternoons, were the best time to study birds. Before and after school I made many observations and found many new birds.

Then the red and brown leaves began to fall, the winds were stronger and the days were cooler and soon the birds were scarce. The Juncos and White-throats flew cheerily about the autumn woods, fed at my lunch-counter, and slept in the evergreen hedge just outside the kitchen windows. They, too, left before the snow came and winter set in in dead earnest.

When the year ended, my list had swelled to 100 species, which doubled last year's record.

The next three years were spent in Hampden and few birds were added to the list. I studied and sketched them at all seasons and formed quite an intimate friendship with them.

In the winter of 1917-18 I got the 'Birds of America,' in three volumes, from the 'Nature Lovers' Library,' and I use this for my main guide. The colored plates by Louis Agassiz Fuertes are the most important part of the work. His plates in *BIRD-LORE* and the 'National Geographic Magazine' have also been a great help. In August, 1918, I got a pair of Reed's nature-study field-glasses, and I always take them to the woods and fields with me.

The discovery of each particular species was a matter worth remembering, but if it were rare it was doubly so. I can well remember the thrill of pleasure that came with the finding for the first time of some particular bird—the Loon, Black Duck, Wood Duck, Golden-eye, Merganser, Bittern, Great Blue Heron, Little Green Heron and Woodcock seen along the stream on different occasions; the Saw-whet-owl in the pine woods; the Snowy Owl chased by Crows about the autumn woods; the Arctic Three-toed Woodpecker found in the burnt woodlands after losing sight of the Owl; the Goshawk in the winter; the Evening Grosbeaks seen in the spring of 1916, and the Rose-breasted Grosbeak this summer.

As I am only fourteen years old now, I may have other opportunities to travel about and study the birds. I hope so.

MY EXPERIENCES WITH BIRDS

I am a member of the Audubon Society and I want to enclose some stories of what I have seen.

The Blue Jay.—I once tied a piece of suet to a tree just outside our dining-room window.

Nothing came for a week, then one day a Blue Jay saw the suet and came again and again until the suet was gone and then continued to come and would stand on the branch and look for the suet. After each meal he would fly from tree to tree, rubbing his bill and uttering his shrill screams of delight.

Experience with a Chipping Sparrow.—Once I was at Camp Dix. On the border of the Camp I saw a little Chipping Sparrow. When I attempted to go near he hopped away a few times, then sat on a stump and let me come very close to him, and give him some food. He picked it up and flew away.

Bird Playmates.—One day while riding my wheel through the woods, I heard a Catbird and a Cardinal and stopped to get a good view of them. Much to my surprise I found that both were young and were hopping around in the bushes having a good time together. They were quite tame so I went very close. The Mother Cardinal was near, keeping watch over her little one.

Woodpecker Tenants.—Just a few yards from our house is a tree with a Woodpecker's nest in it. They have come back to it for the third year now. Each year they find the gray squirrels have used it for the winter and they have quite a fighting time for a few days. Each time the Woodpeckers conquer and the squirrels have to take their young out and find another house. Then the Woodpeckers work at cleaning out and throwing out shells and carry in other stuff for themselves. They come here late in March and leave in October.

I have just finished making two bird-houses and want to make some others.—RUSSELL ELWOOD (age 11 years), *Absecon, N. J.*

THE A. B. C.

As soon as I became a member of the Junior Audubon Club of the Hardie School, Beverly, I made up my mind to form a club of my own so I got four children and formed the A. B. C. (the American Bird Club). We meet Wednesdays after school. We have a president, a vice-president and a treasurer. The dues are five cents every two weeks. We buy pictures of birds and give them out at the meetings. At the last meeting a slip of paper with the name of a bird on it was drawn by each member. Each member must be able to tell about that bird at some other meeting. At the meetings the roll is called and reports of all birds seen are given. We plan to go on bird-walks, and we have very pleasant times studying the birds in the Club. I have seen, this spring, Chickadees, Juncos, Blue Jays, Bluebirds, Fox Sparrows, Song Sparrows, Robins, Goldfinches, and Grackles.—EDITH S. HOLDEN (age 12 years), *Beverly, Mass.*

MY BIRD - HOUSE

In the early spring of 1917 I spent a few days of my Easter vacation in erecting some bird-houses in the apple trees behind our house. I took some pains in making two wooden ones and placed them in the choicest crotches of the trees. I also made a hole in a tin can, punched a few small holes in the bottom, smoothed the rough edges, and, with its cover on, nailed it to a limb. Little did I expect any bird would desire this for a home.

When returning again from school, I investigated my bird-houses. To my great joy and surprise I found a partially built bird's nest in the tin can. I did not have to watch long before I saw it was a pair of pretty Bluebirds building there. They would light near the can with a twig or piece of straw in their beaks, then, after glancing around, would enter the can, making some noise while passing into their tin house.

I listened to their singing and watched them much from the ground during the summer, but finally curiosity overcame me, and I climbed the tree again. Taking off the roof of the house, I saw three greenish blue eggs. While I was looking in, one of the birds lit nearby and scolded me in very sweet tones. A

week later I was alarmed to find the Bluebirds squabbling with a pair of intruding House Wrens. The latter were driven off, though, and the Bluebirds were soon able to lead their family proudly into the world.

Immediately on this family's departure, the House Wrens took charge, and I was often charmed by their gushing song. When I investigated their nest, the birds, without seeming fear, attacked me with much chattering. I was surprised at the size of a nest for such small birds. The can was entirely filled with twigs, excepting a deep hollow in the center where lay seven speckled, flesh-colored eggs. These birds also successfully brought up their young. The two Bluebirds and House Wrens returned last spring. This spring I was obliged to move the bird-house while the Bluebirds were building in it. At first they seemed dumfounded, and I feared they might seek a new home, but they soon found the rusty can and seem satisfied with their new situation.—W. THOMPSON, *Fitchburg, Mass.*

THE JUNIOR SONG-BIRD CLUB

Six of us boys have a little bird club named 'Junior Song-Bird Lovers.' We live near the Western Cemetery, where we can see lots of birds. We had the pleasure of seeing a flock of Evening Grosbeaks. In 1916 and 1917 these birds were quite common, but in 1918 we didn't see one of them. In 1919 they came back again.

I am very much interested in the Cedar-bird. I have had several chances to meet this bird. We went to a bird lecture by Charles C. Gorst. I sold eight tickets for it.—GEORGE B. ORR, *Portland, Maine.*

NOTE FROM A YOUNG CONTRIBUTOR

I saw a bird in the garage. That bird was dead. There were caterpillars all over it. It was a Wren. I have seen them very often. They have a nest beside our porch. They have a pretty little song, but they scold when we go near them.—GRISCOM MORGAN (age 7 years), *Englewood, Ohio.*



THE RED-EYED VIREO

By T. GILBERT PEARSON

The National Association of Audubon Societies

EDUCATIONAL LEAFLET NO. 99

Any boy or girl in eastern United States who begins to study wild birds will probably not proceed very far before learning to know the Red-eyed Vireo. To be sure, it is one of our small birds, measuring only about $6\frac{1}{4}$ inches in length, and this fact, together with its rather dull greenish coat and whitish underparts, renders it of unstriking appearance, yet it is very well known. And why? Chiefly because it sings so much. It announces its arrival in spring with such loud notes that many mistake its calls for those of the Robin. For three full months and more it is with us, and every day, from long before sunrise until evening, its simple songs are repeated over and over again. No other bird of our land retains its energy and enthusiasm for song as does the Red-eyed Vireo. Neither the anxieties of the nesting season nor the irritations of the molting days appear in the least to affect its behavior in this regard.



RED-EYED VIREO ON NEST

Photograph by Dr. Frank M. Chapman

No wonder, therefore, the young bird-student soon makes its acquaintance. Even as I write these lines, on a hot afternoon late in June, I can hear the notes of a Vireo coming in through the open window. The bird is out there among the trees of a vacant lot, where the small boys have dug their trenches and are sending forth their volleys of vocal musketry. The savage shouts of



RED-EYED VIREO

Order—PASSERES
Genus—VIREOSYLVA

Family—VIREONIDÆ
Species—OLIVACEA

National Association of Audubon Societies

youth and the song of the Vireo have been going on together now for some weeks, and the authors of all the din apparently have never noticed each other.

The past four years a pair of Vireos has spent the summer in the trees of this vacant lot. One June day I found the nest near the outer end of a white birch limb. The nest could easily be reached by a grown person standing on the ground beneath. It was a beautiful cradle, hung in the fork of two twigs, and was made mainly of strips of bark, dried grasses, and plant fiber. A piece of white string and some scraps of paper decorated the outer sides. It contained four white eggs, lightly spotted around the larger end. From these there emerged in time four little birds that for many days engrossed their mother's attention. After they had flown away I took the nest and placed it on the wall of my study. The next spring, while passing near the place with a little friend of mine, I went over to the limb and showed her the place from which I had cut the twig to take the nest. Just as I took it in my fingers I was surprised and delighted to find a new Vireo nest not more than 12 inches from where the other had been, and in it sat a parent bird, its red eyes plainly visible. In due time this nest also was removed to the study.

The past year I could not find the nest, although the birds were about and the male was heard singing every day. When autumn came, however, and the leaves had fallen, the nest was discovered in another tree a few yards away at a height of at least 20 feet from the ground. Only yesterday I learned that for the fourth time a Vireo's nest has been found in the vacant lot. One of the boys discovered it suspended from a swinging limb just over a path along which commuters hurry every morning for trains. So I went out to look, and found that it held one vigorous young bird that cried most outrageously when I pulled the limb down a few inches in order to remove a dead one whose head hung over the edge.

One of the questions which naturally arises in connection with this record of nests is whether they were all built by the same pair of birds. It would seem that such was probably the case, although there is no possible way of knowing.

In a few weeks now the Vireos will be gone and for more than eight months we shall hear no more of them. Traveling southward, chiefly by night, stopping to rest in groves, orchards, and forests as they proceed, the Vireos journey on, some of them passing downward through western Texas and Mexico to the far-away tropics. Others reach the Gulf of Mexico along the coast of Louisiana, Mississippi, or western Florida, and there, after a brief pause, plunge out across the tumbling waters of the sea and never sight land again for six to eight hundred miles until they reach Yucatan or Central America. Through the interminable jungles of South America they continue their journey until they reach the regions of the equator, many going on southward into southern Brazil.

Here, in the great steaming forests, they remain for some months until the instinct of migration again begins to beat in their veins. Then our little friends turn northward, and those that have survived in due time gain the boundaries

of the United States. A little time passes, and then one spring morning we again hear their cries in the grove about the house. Wilson Flagg once said that the words which the Red-eyed Vireo sings are clearly these: "You see it—you know it—do you hear me? Do you believe it?" Never do I pause to listen to one of these birds without recalling these words, for the music comes in a series of groups of short, clear, questioning calls, and Mr. Flagg's interpretation is perhaps as accurate as any that has been suggested.

How little we know of the courtship of birds! Dr. W. M. Tyler, of Lexington, Mass., writing in *BIRD-LORE* some time ago, related this remarkable experience:

"This afternoon, about 6 o'clock, I saw a pair of Red-eyed Vireos acting in a manner new to me. They were in a small gray birch tree, 12 feet from the ground, and almost over my head. The two birds were very near each other; so near that their bills might have touched, although they did not. The male, or at least the bird who played the active rôle, faced the side of the other bird, so that their bodies were at right angles. The bird, who, from her passive actions, I assumed, but perhaps wrongly, to be the female, sat crouched low on her perch, with the feathers slightly puffed out. But, although in the attitude of a sick bird, she appeared in good health, I thought, and I am certain, that she gave close attention to the strange actions of her companion. The bird I have called the male, and I think it is safe to so consider him, was constantly in motion. He rocked his body, especially his head, from side to side, his bill sweeping over the upper parts of the other bird, never touching her, nor, indeed, coming very near it, for his head was above and a little to one side of her back. In swinging from side to side he moved slowly but with a tenseness suggesting strong emotion. In contrast to the fluffy female, the feathers of the male were drawn closely about him, so that he looked slim and sleek. The neck seemed constricted, giving him a strangled appearance.

"Neither bird opened its beak, but one of them continually uttered, with no suggestion of Vireo phrasing, some faint notes in a thin, almost squeaky tone, nearly as high-pitched as a Kingbird's voice. I thought, when I first heard the notes and stepped aside to identify the bird, that a Goldfinch was singing very softly under his breath. There were the same little trills, and, in between, the same sustained notes, the whole suggestive of the Goldfinch, but very quietly and gently given. It was as if a Goldfinch who had lost much of his power and all of his energy were whispering his song into the ear of his lady-love

"Few birds are so tame when on the nest as is the Vireo. Only this spring I pulled down a twig where a bird was brooding her eggs and actually thumped the bird on her breast with my finger before she would leave, and when I went away she immediately returned to her vigil." Dr. Anne E. Perkins, of Gowanda, N. Y., has written a story about a female Vireo that was so unusually tame that she tried the experiment of feeding it. In her account she says:

"I hastily caught a small, succulent green grasshopper and slowly, cau-

tiously, advanced my hand till the grasshopper was within easy reach of the bird. The male kept up a constant scolding in the top of the apple tree containing the nest, while I stood trying to win his wife's confidence. It seemed many weary minutes that she sat motionless or with a slight suspicion of fear in her little red eye, cowering closer to the eggs. Then, just as my hand ached intolerably and I was about to withdraw it, she made a slow movement of the head towards me—and hastily snatched the grasshopper. I was delighted and praised her audibly for her discrimination and confidence. She devoured several more grasshoppers very readily, once the ice was broken. The male bird all the time seemed anxious and kept up a continual scolding. I made visits once or twice daily thereafter, and she was perfectly fearless about taking food, eagerly accepting small flies and grasshoppers, invariably refusing worms, and showing preference for grasshoppers.

"She would allow me to stroke her, close my hand about her, almost lift her from the eggs, reach under her, etc. Once or twice she left the nest and flew at her mate when he was making demonstrations of fear and distress, knocked him smartly off his perch, snapping her bill and scolding vigorously, then took her place again on the eggs. It was exactly as if she told him that she would not be interfered with and that he could attend to his own affairs."

Mr. E. H. Forbush, who has studied carefully the feeding habits of many birds, says of the Red-eyed Vireo:

"It is one of the most effective enemies of the gipsy and brown-tailed moths. Moths and butterflies of many kinds are eaten; also assassin bugs, tree-hoppers, bugs that eat plants and fruit. Many beetles, among them boring beetles, black beetles, and weevils, grasshoppers, katydids, locusts—all are eaten. This bird at times becomes an expert fly-catcher, taking horse-flies, mosquitos, and other gnats and gall flies. It appears to take a larger proportion of fruit than other Vireos. Blackberries, raspberries, and mulberries are commonly eaten."

He quotes other authorities as stating that the bird eats dogwood berries, sassafras, magnolia, poke-berries, and wild grapes.

The Red-eyed Vireo belongs to the order *Passeres*, perching birds, and to the family *Vireonidæ*, of which there are twenty-five species in North America.



The Audubon Societies

EXECUTIVE DEPARTMENT

Edited by T. GILBERT PEARSON, Secretary

Address all correspondence, and send all remittances for dues and contributions, to the National Association of Audubon Societies, 1974 Broadway, New York City. Telephone, Columbus 7327

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Any person, club, school or company in sympathy with the objects of this Association may become a member of it, and all are welcome.

Classes of Membership in the National Association of Audubon Societies for the Protection of Wild Birds and Animals:

\$5 annually pays for a Sustaining Membership
\$100 paid at one time constitutes a Life Membership
\$1,000 constitutes a person a Patron
\$5,000 constitutes a person a Founder
\$25,000 constitutes a person a Benefactor

FORM OF BEQUEST:—I do hereby give and bequeath to the National Association of Audubon Societies for the Protection of Wild Birds and Animals (Incorporated), of the City of New York.

REPORT OF JUNIOR AUDUBON CLASSES

With the ending of the world war and the gradual tendency of the country to return to normal, the interest in the organization of Junior Audubon Societies began to increase. Toward the close of the school-year, Junior memberships were pouring into the home office often at the rate of 10,000 a week. To the delight of the office force, the mails began to assume somewhat their pre-war appearance.

Another year there should be a very large enrollment, as the calls on the school-children for contributions to the Red Cross, War Savings Stamps, and numerous other activities incident to the war will undoubtedly be less than during the past two years.

Hundreds of letters received from teachers and pupils give evidence of the vast influence that the Junior Audubon Societies are today exerting in the United States and Canada. Scores of communities have been aroused, almost to fever heat, on the subject of constructing and erecting bird-boxes, giving bird-exhibits, bird-programs, or in reporting violations of the game-laws. Many of the Juniors serve as volunteer deputy game-wardens, and are constantly on the lookout for

hunters who illegally shoot birds. In hundreds of local newspapers the progress of the local Junior work has been scheduled and commented upon.

If all the phases of the National Association's activities had to be abandoned but one, it is very probable that the responsible officials would vote to maintain the Junior work as the one most important feature.

The following table shows the number of Junior classes formed and the enrollment of the Junior members:

Summary for Year Ending June 1, 1919

State	Classes	Members
Alabama	14	407
Arizona	2	73
Arkansas	4	254
California	96	3,497
Colorado	70	2,099
Connecticut	486	13,156
Delaware	4	133
District of Columbia	1	39
Florida	14	427
Georgia	12	384
Idaho	26	849
Illinois	259	8,714
Indiana	147	4,576
Iowa	150	4,733
Kansas	48	1,566
Kentucky	21	506
Louisiana	8	171

State	Classes	Members
Maine	76	2,132
Maryland	55	1,963
Massachusetts	455	13,023
Michigan	182	5,008
Minnesota	318	8,517
Mississippi	5	185
Missouri	112	3,259
Montana	37	979
Nebraska	86	2,281
Nevada	8	185
New Hampshire	58	1,626
New Jersey	203	6,325
New Mexico	3	88
New York	917	25,385
North Carolina	16	476
North Dakota	29	759
Ohio	858	21,631
Oklahoma	46	1,421
Oregon	108	3,753
Pennsylvania	515	16,484
Rhode Island	12	410
South Carolina	18	771
South Dakota	31	1,069
Tennessee	9	289
Texas	26	827
Utah	19	416
Vermont	34	1,018
Virginia	28	851
Washington	89	3,214
West Virginia	50	1,564
Wisconsin	151	3,782
Wyoming	10	268
Canada	278	8,251
Totals	6,204	179,794

The generous and unnamed benefactor, who for many years has almost entirely supported this work, has again signified his willingness to contribute \$20,000 for the Junior effort the coming year. The following is the total list of contributors to the Junior Audubon Campaign the past season:

Unnamed Benefactor	\$20,000 00
E. W. Mudge	50 00
Mrs. Denning Duer	20 00
Miss Edith G. Bowdoin	50 00
Mrs. Frederick H. Alms	25 00
Miss Mary Mitchell	50 00
Edward L. Parker	100 00
James H. Barr	100 00
Total	\$20,395 00

Late Spraying Kills Birds

Mrs. S. Louise Patteson, who recently represented the National Association in giving a course of school lectures and other work in Massachusetts, has called attention

to the loss of bird-life caused by late spraying. In her report she says: "I noticed that much spraying was done as late as June, and many birds' nests were drenched, with the result that young birds and adults were found dead about the ground on the farm of the Girls Industrial School at Lancaster, and also at the Lyman School at Westboro."

It is quite evident that this is a matter which should be borne in mind when spraying operations are contemplated. This is the only one of numerous complaints of the poisoning of birds with fruit-tree sprays which has been reported to this office of recent years. If it is deemed wise to punish a man for shooting a song-bird, why should there not be retribution when a man with a spraying hose kills a whole nest full of birds?

A New Jersey Heron Colony

May's Landing is the county-seat of Atlantic County, New Jersey. About 8 miles northwest of this attractive little metropolis is situated the Makepeace Reservoir, which was made by damming a stream, perhaps eight years ago, in order to accumulate water for flooding certain cranberry bogs. The lake thus formed is a mile or more in length and the width in places is probably as great. For the most part it is shallow and many water-lilies and grasses adorn its surface.

On June 1, 1919, the writer, in company with his host, Ira T. B. Smith, of May's Landing, and some of his friends visited the Makepeace Reservoir. In forming the lake a white cedar swamp was inundated and the trees, now long dead, contained on this date a nesting colony of Great Blue Herons. Sixty-six nests, all apparently of this year's construction, were counted. These were collected in three main groups, each within sight of the others. The Herons exhibited proper precaution and departed while the boats were yet several hundred yards away. On many of the nests young were observed, but upon close approach they showed the usual Heron characteristic of crouching down out of sight.



PART OF NESTING COLONY OF GREAT BLUE HERONS, MAKEPEACE RESERVOIR, N. J.
Photographed by T. Gilbert Pearson



YOUNG GREEN HERONS ON NEST, MAKEPEACE RESERVOIR N. J.
Photographed by T. Gilbert Pearson

Five nests of Green Herons and three nests of Purple Grackles also were noted. These were supported by limbs growing out from the trunks of trees only a few feet from the water, while the nests of the Great Blue Herons were situated at a height of from 12 to 40 feet. Among other birds observed on the lake that day were four Black Ducks, ten Wood Ducks, including six young, also numerous White-bellied Swallows that were nesting in holes of dead trees and stumps. One of these examined was found to contain large numbers of Great Blue Heron feathers. Two

Pied-billed Grebes surprised me by calling among the lily-pads.

There exists a general impression in the neighborhood that of recent years Egrets have been breeding in this Heron colony. None were observed, however, and it is altogether probable that the rumor is incorrect, as at this time we have no knowledge of any Egrets in eastern United States breeding north of Carteret County, North Carolina. It is possible that during the summer a few Egrets that have a way of migrating northward at this period may come here to roost with other long-legged members of their tribe.

GOOD WORK OF THE BIOLOGICAL SURVEY

Frequently this office receives from E. W. Nelson, Chief of the Bureau of Biological Survey in Washington, D. C., communications reporting some of the more interesting phases of conservation work in which the Survey is engaged. The following is one of those recently received from Mr. Nelson.

"Dear Mr. Pearson: If you have not already been informed, it will interest you to know that our wardens Pacetti and Farnham managed, in Miami, to capture aigrettes and other plumes in the possession of Willie Willie, a Seminole Indian, who appears to be living in high style in Miami, and also another Miami man. Willie Willie appears to be a man who, according to our information, has probably been making a large income through traffic in plumes for a considerable number of years. The men did a good piece of detective work there and made the first step toward our new work in breaking up the traffic in aigrette feathers in the state.

"It will also please you, no doubt, to learn that Judge Trieber, of Arkansas,

recently fined ten men for violating the regulations covering the Big Lake Bird Preserve and sent three of them to jail, remarking at the same time that if they were brought before him again he would see to it that they were definitely prevented from entering upon the reservation again, implying by this, of course, that he would send them to jail. This information is very satisfactory, and indicates that we are likely to be able to protect that reservation in good shape.

"I was surprised recently to learn that the last legislature of Vermont passed a law which authorizes the state game-warden, with the consent of a certain state board, to purchase lands which have been recommended by the Biological Survey for state game- or bird-preserves. Dr. Field will go to Vermont next week to go over some land with the state game-warden for this purpose. This is encouraging, since it will start the purchase of land in the New England States for state game-preserves, and I hope that other states may follow suit."

New Life Members Enrolled from October 19, 1918, to July 1, 1919

Bordon, John
Brodhead, Charles Dingman.
Clark, Miss Elizabeth L.
Coope, Mrs. Bertha
Cory, Daniel W.
Driver, Raymond E.

Fauntleroy, Miss Juliet
Faux, William J.
Ford, Lee M.
Garnsey, LeRoy
Godfrey, Mrs. A. E.
Gordon, Mrs. Mackenzie
McGregor, R. C.

Mellon, Mr. and Mrs. F. P.
Nevins, Mrs. Harriette F.
Pitney, Robert Henry
Prentice, Miss Clare
Smith, Miss Eunice Cole
Sprague, Mrs. Isaac
Sprague, Shaw

New Sustaining Members Enrolled from January 1, 1919 to July 1, 1919

Abbott, Mrs. B. St. L.	Campbell, Miss H. S.	Emlen, Miss Susan T.
Abbott, Henry W.	Canandaigua Bird Club	English, Mrs. Lewis H.
Achelis, Margaret	Canatt, Mrs. E. B.	Estey, Harold, Jr.
Agnew, Donald	Carlisle, George L., Jr.	Ewing, Mrs. Thomas
Albrecht, Henry C.	Carlton, Mrs. Newcomb	Falconer, J. W.
Aldis, Mrs. A.	Carter, Miss Helen L.	Farley, Mrs. J. N.
Allen, Frances P.	Chamberlin, Mrs. W. B.	Farrel, Franklin, 3d.
Allen, Rev. Frederick B.	Chapman, H. A.	Faxon, Mrs. Frank A.
Allen, Dr. J. A.	Chappell, F. H.	Feely, Ambrose
Allender, Miss Irma	Chase, Mrs. A. W.	Fernald, Mrs. Leily B. T.
Andrews, J. H.	Cheney, O. H.	Field, Thomas G.
Angert, Eugene H.	Childs, Helen P.	Field, Mrs. Marshall, 3d.
Anson, Hon. Wm. Alfred	Chisholm, George H.	Flint, Mrs. Joseph Marshall
Arnold, Reuben R.	Clinton, Mrs. Arthur	Forbes, Mrs. Wm. H.
Atkinson, Mrs. E. W.	Clothier, Mrs. Walter	Forrest, Mrs. George D.
Auchincloss, Mrs. E. S., Jr.	Clymer, W. B. Shubrick	Foster, Mrs. A. C.
Babcock, Mrs. C. H.	Codman, Mrs. Ogden	Foster, Mrs. James N.
Bacon, N. T.	Cohen, Mr. and Mrs. J. H.	Foster, Walter R.
Badger, Mrs. Walter I.	Collins, Mrs. Henry H., Jr.	Fowler, Mrs. John
Bailey, Mrs. Florence M.	Community Bird Club	Franklin, Mrs. M. L.
Baird, Alvin U.	Coolidge, John T., Jr.	Fulton, William E.
Baker, Benjamin H.	Coolidge, Thornton L.	Gamble, James L.
Baker, Mrs. J. A.	Corning, Mrs. John J.	Gary, Mrs. J. W.
Baker, John T.	Cram, Mrs. C. H.	Gath, John
Ball, Ansell H.	Crawfordsville Audubon and	Genung, Alfred V. C., Jr.
Bancroft, Rev. and Mrs. Jas.	Nature Study Club	Gibbon, John
Barclay, Mrs. Wm. Orr	Cross, W. Redmond	Gilbert, Mrs. W. T.
Barnes, Mrs. A. C.	Cummings, Edward	Goodman, Mrs. E. H.
Barnes, H. B.	Cunningham, Miss H. A.	Graves, Mrs. Charles B.
Barnett, David P.	Curtis, Mrs. G. S., Jr.	Gray, Ellen W.
Barrows, Mrs. Geo. S.	Curtis, Mrs. M. M.	Greystone Park Bird Club
Bartlett, Mrs. Mary N.	Cushing, Grafton D.	Griswold, S. A.
Barton, Bolling	Danforth, Mrs. Richard E.	Guggenheim, Mrs. S. R.
Bayne, Misses	Danielson, Mrs. Richard	Hall, Willis E.
Bekins, Mrs. John	Darrow, Gen. W. N. P.	Hallenberg, A. L.
Bentley, Mrs. Cyrus	Darrow, Mrs. W. N. P.	Hallowell, Hannah
Berges, Jacob	Davis, Edward E.	Halstead, Mrs. Robert
Bessey, Mrs. Constance C.	Davison, G. C.	Hambleton, Mrs. Frank S.
Bigelow, Mrs. Jos. S.	de Lorenzi, Miss Susie	Hamilton Bird Protection
Blake, Col. E. M.	Denel, Mrs. W. F.	Society (The)
Bloch, Bernard	Denison, Mrs. Charles	Harbeck, Dorothy D.
Block, John B.	Denny, Mrs. Arthur B.	Hare, Mrs. Meredith
Book, R. D., M.D.	Dexter, Miss Alice S.	Hausmann, T. L.
Bott, Mrs. Fred J.	Dickason, Livingston T.	Hazard, Miss Caroline
Bourneuf, F. Raymond	Dill, Mrs. Charles G.	Heck, George C.
Bradley, Mrs. M. W.	Disney, Dwight R.	Hersch, Mrs. W. A.
Braman, Chester A., Jr.	Dittman, Mrs. Geo. W.	Hess, V. E.
Erawner, Miss Maybelle F.	Dodge, Mrs. Randolph	Hightower, J. D.
Bray, Russell S.	Doscher, Charles	Hinchman, Mrs. C. S.
Brewster, Dr. Matthew	Drago, N. F.	Hirschhorn, Mrs. Fred
Bristol, B. B.	Drake, Durant	Hoge, Frances L.
Bristol, Mrs. B. B.	Drayton, Judson	Holmes, R. C.
Brooks, Ernest, Jr.	Drosten, Mrs. Frederick W.	Hood College Bird Club
Brooks, William B.	Drummond, Mrs. C. C.	Hoppin, Mrs. W. A.
Brown, Mrs. James P.	Dumaresq, Mr. and Mrs. H.	Howard, Mrs. Clarence H.
Brown, James W.	Dunn, Mrs. Myra	Howard, Mrs. Ethan H.
Bruening, E. H.	Eaton, Miss Eleanor B.	Howe, Morgan R.
Buch, Miss Emily	Eggleston, Julius W.	Hoyt, Edwin
Buckstaff, Geo.	Elbricht, Mrs. R. E.	Hoyt, John S.
Burgess, Mrs. T. P.	Elkins, Mrs. Stephen B.	Hudson, H. K.
Butler, Elmer T.	Ellegood, R. E.	Hull, Mrs. Baker
Butler, Mrs. Wm. A.	Ellis, Mrs. Wm. S.	Hunt, Dr. Annie W.
Cameron, Mrs. C. E.	Emerson, Charles Plummer	Hunt, Mrs. Wm. D.

- Huntington, Mrs. Francis C.
 Irwin, Theodore
 Jackson, Crawford
 Jackson, Mrs. Percy
 Jackson, Mrs. R. B.
 James, Mrs. Julian
 Jarecki, R. K.
 Johnson, Edw. H.
 Johnson, Mrs. Lawrence
 Johnston, Mrs. D. V. R.
 Johnstone, Margaret A.
 Jonas, Mrs. A. F.
 Jung, Charles R.
 Kaufman, D. J.
 Kelley, William V.
 Kemmerer, M. S.
 Keyes, Mrs. Charles W.
 Kimball, H. Earle
 Kinsella, Mrs. A. L.
 Kleinhaus, Mrs. Gedwig
 Knight, Miss Edith
 Knoblauch, Mrs. A.
 Knudson, Augusta M.
 Koehler, Hugo A.
 Kohl, Mrs. C. E.
 Kohler, Miss Veronica M.
 Kriekhaus, Elles W.
 Lackner, Miss Louise
 Lange, Edward L.
 Lansing, Mrs. Charles A.
 Lawler, Mrs. T. B.
 Leavenworth, Geo. H.
 Leeds, Norman
 Lehmann, Mrs. F. W.
 Leonard, Mrs. F. E.
 Lewis, Mrs. Thomas H.
 Lichter, J. J.
 Liggett, Mrs. Mary L.
 Lihme, Mrs. C. Bai
 Lindley, Mrs. Allen L.
 Lippincott, Arthur H.
 Lockwood, Mrs. George R.
 Lockwood, Miss Mary E.
 Lockwood, M. E.
 Lorsch, Mrs. Arthur
 Loughran, Mrs. M. F.
 Loveland, Charles N., Jr.
 Lowell, Mrs. A. Lawrence
 Luedtke, Capt. Gustav H.
 McConnell, Mrs. J. F.
 McConnell, Mrs. Marion E.
 McCord, George L.
 McKinlay, Mrs. D. A.
 McMahon, Mrs. John B.
 Mather, Stephen T.
 Matlack, Bennett K.
 Matthies, Katharine
 Meinhard, Morton H.
 Mickle, A. D.
 Migel, Elsie P.
 Milliken, Mrs. G. H.
 Minford, Mrs. L. W.
 Minich, Mrs. Katharine C.
 Mitchell, O. L.
 Moody, Mrs. Samuel
 Moore, Mrs. H. McK.
 Morehead, J. M.
 Morris, Mrs. George K.
 Murphey, Mrs. Jenny S.
 Murphy, Mrs. Eugene B.
 Nesbit, Scott
 Neugass, Mrs. Edwin
 Newark Bait and Fly
 Casting Club
 Newborg, M.
 Newell, Mrs. E. A.
 Newell, John M.
 Newton, Mrs. F. Maurice
 Nichols, Mrs. Acosta
 Nichols, Mrs. Geo.
 Niedringhaus, Miss M.
 Norris, Mrs. Richard
 Norton, Charles W.
 Ochs, Adolph
 Olds, W. B.
 Ormsby, Mrs. O. S.
 Orr, James A.
 Ortman, Mrs. Randolph
 Osborne, Mrs. H. S.
 Paddock, Mrs. H. L.
 Parrish, James C.
 Payson, Herbert
 Peck, Mrs. Wallace F.
 Pell, Walden
 Perkins, Mrs. Geo. W.
 Perry, Margaret
 Phelps, Edward J.
 Pierce, Mrs. E. B.
 Plummer, Henry M.
 Porter, Willard H., Jr.
 Pulsifer, Mrs. N. T.
 Pyfer, Fred S.
 Reed, Earl H., Jr.
 Reutter, Mrs. L.
 Rhoades, Mrs. Lyman
 Rhoades, Miss N.
 Richardson, Charles F.
 Riley, Mrs. James W.
 Roberts, Miss Fanny E.
 Robinson, Mrs. Douglas
 Robinson, Henry J.
 Rockefeller, William A.
 Rockwell, Mrs. G. F.
 Rogers, Mrs. Charles F.
 Rogers, Mrs. Geo. S.
 Rollins, Ashton
 Root, Mrs. A. K.
 Rothbarth, Albert
 Rowland, Edmund
 Sackett, Mrs. Charles A.
 St. Ormond, S. M.
 Saltonstall, Philip L.
 Sanborn, Wm. R.
 Sandford, Mrs. Lisa W.
 Savery, Thomas H., 3d.
 Schear, E. W. E.
 Schlesinger, Mrs. Mary
 Scoville, Herbert
 Scranton Bird Club
 Sears, Mrs. Francis B., Jr.
 Seymour, Edmund
 Shrigley, Miss Ethel Austin
 Shumway, Franklin P.
 Silsbee, Mrs. Geo. S.
 Sloan, Mrs. Samuel
 Smyth, Miss Sarah A.
 Snow, E. G.
 Snow, Mrs. Fred K. A.
 Sommerhoff, F. A. E.
 Spalding, Dora
 Spear, L. H.
 Stevens, Mrs. F. W.
 Stoddard, Miss M. F.
 Stone, Miss Bessie P.
 Stone, Harry B., Jr.
 Stowell, Ellery C.
 Stranahan, Henry
 Strong, Edward
 Summey, D. L.
 Swain, Frederick
 Swenson, F. A.
 Taft, Miss Mary F.
 Tag, Albert
 Taylor, H. A.
 Tglander, Arnold
 Thomas, Mrs. Samuel H.
 Thorndike, Richard K.
 Thursby, Miss Emma C.
 Tuckerman, Mrs. B., Jr.
 Utter, Henry E.
 Vanderveer, John H.
 Van Rensselaer, Cortlandt S.
 Vaughan, Ira
 Waldo, Joan
 Waldo, Natalie
 Walker, Mrs. Albert H.
 Walls, Mrs. Frank X.
 Ward, Mrs. G. C.
 Ware, Mrs. A. L.
 Ware, Miss Harriet
 Warren, Mrs. Charles H.
 Watson, Mrs. C. N.
 Weber, Adolph
 Weiseman, T. Walter
 West Chester Bird Club
 West Virginia Bird Club
 Whitcomb, Mrs. Howard
 Whitehouse, Mrs. F. M.
 Whitney, Mrs. Payne
 Wicker, John D.
 Wilkinson, Mrs. Henry L.
 Williams, Mrs. Charles A.
 Williams, Hugh W.
 White, Mrs. J. William
 Williams, Richard E.
 Wilson, Mrs. A. A.
 Wilson, Miss Mabel
 Wolff, Mrs. Otto, Jr.
 Woman's Club of Carrollton
 Ziesing, August
 Zinsmeister, Mrs. Elsie A.

THE GEORGIA PREACHER AND THE JAY

The *Tampa Tribune* for June 10, 1919, contained the following item from Sandersville, Ga.:

"W. W. Wray, pastor of the Baptist Church here, created a mild sensation at his morning services yesterday when he stopped in the midst of his sermon, obtained a shotgun, and killed a Jaybird that had been flying around the auditorium and singing while the services were in progress.

"Mr. Wray announced, before the congregation sang a hymn, that he would kill the bird if it sang again. The moment the

congregation stopped singing, the Jay began. The preacher immediately stopped the services, went to his home near the church, got his gun, returned to the church, and took his stand in the center of the building. He fired once, the bird tumbled to the floor, and services were resumed after the powder and smoke had cleared away."

It may be noted in this article there is no word of condemnation of the action of this Georgia minister of the Gospel in shooting a wild bird.

BIRD-BOX CONTEST IN NEW ORLEANS

New Orleans has had its first bird-box building contest. It was brought about largely through the efforts of the *New Orleans Item*, one of the city's daily papers. Hundreds of boxes were submitted and later were erected on private grounds and in the city parks.

M. L. Alexander, head of the State Department of Conservation, has written most enthusiastically regarding the great amount of interest which the contest aroused. He feels that work of this char-

acter will bear much fruit in the way of Louisiana bird-protection.

Prizes were awarded for the "best general construction," "best Martin-house," "best single-room house," "best Wren-house," "most originality," "best rustic house," "best economy house," "best pole-box house," "best bark house," "best cool house," "best Pigeon-house," "best three-story house," "best bird-cottage," "best Chickadee-house," and "best bird-house built by a girl."

INTERFERENCE WITH FEDERAL COÖPERATION

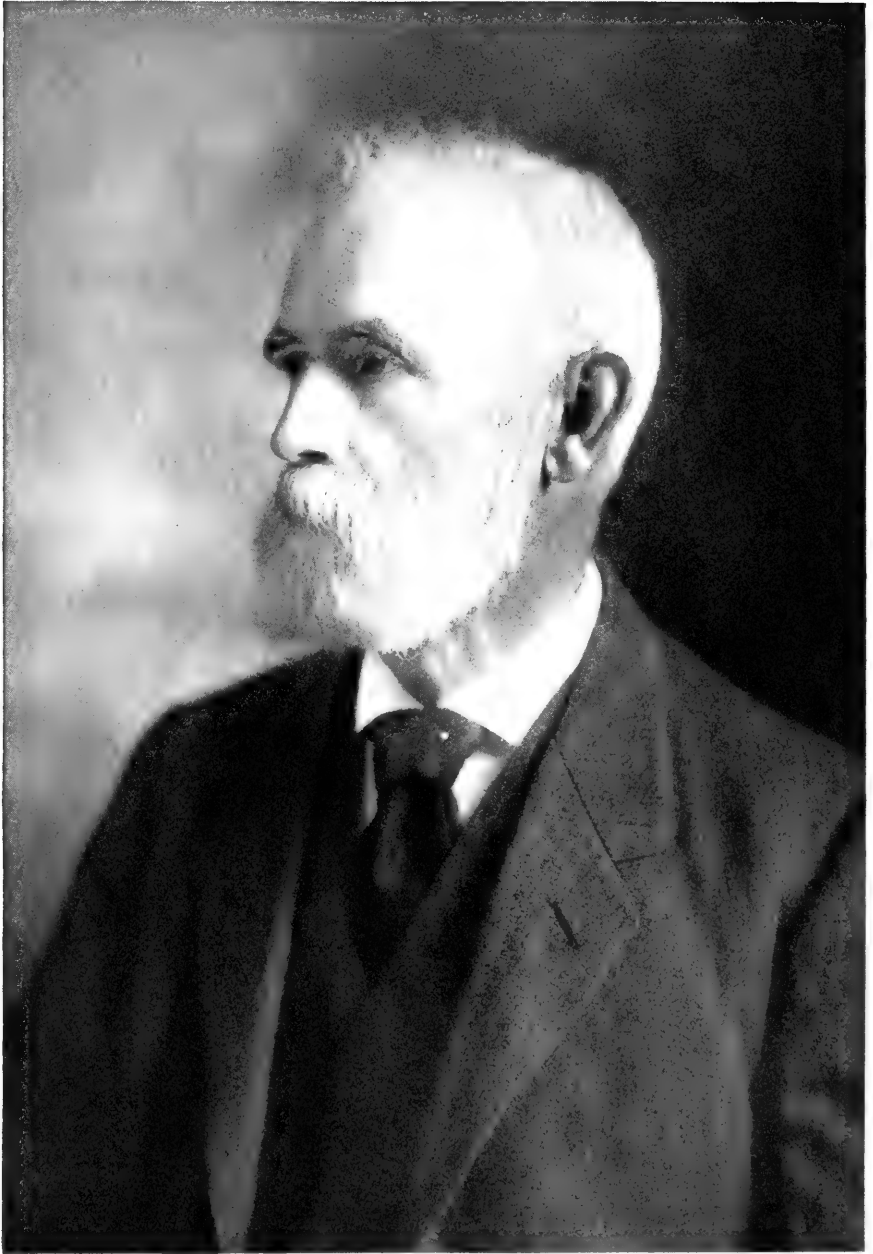
A new Federal law went into effect July 1, 1919, by the terms of which no Federal employee receiving salary from the Government may accept any additional compensation from individuals or corporations. This puts an end to the co-operation between the National Association and the Biological Survey, in reference to the joint employment of wardens on Government bird-reservations.

The Association has always taken great interest in these Government bird sanctuaries, and, in fact, the officers and directors of the Association were largely, if not wholly, responsible for the establishment of the Government bird-reservation system which is in operation today.

From the day the first reservation was

established, March 14, 1903, the Audubon Societies have provided some wardens for their protection. For the first six years all wardens guarding the reservations were employed by the Audubon Societies. At the end of that time Government appropriations began to be available for the purpose. These funds, though totally inadequate, have been increased through the years, with the result that the proportion of the expense which the Association has borne has become much less than formerly.

On the first of July the Association ceased paying any of these wardens, and the three patrol boats which we have heretofore maintained have been turned over to the Biological Survey. Audubon Wardens of course continue to serve.



William Brewster

December, 1916.

Bird-Lore

A BI-MONTHLY MAGAZINE
DEVOTED TO THE STUDY AND PROTECTION OF BIRDS
OFFICIAL ORGAN OF THE AUDUBON SOCIETIES

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No. 5

WILLIAM BREWSTER, 1851-1919

"Even the death of friends will inspire us as much as their lives. . . . Their memories will be encrusted over with sublime and pleasing thoughts, as monuments of other men are overgrown with moss."—THOREAU.

WILLIAM BREWSTER died at his home in Cambridge, Mass., on July 12 last, seven days after the completion of his sixty-eighth year. Those who are familiar with the results of his studies of birds and of the work upon which he was still engaged, can measure the extent of his loss to ornithology; but only those who were so fortunate as to know the man can realize the nature of the loss sustained by his friends.

Brewster never enjoyed rugged health. After his graduation from the Cambridge High School, in 1869, his physical condition prohibited his entering college. Fortunately, circumstances permitted him to gratify his inborn desire to study birds. Ever more interested in the living bird than in the dead one, his ornithological pursuits kept him much out-of-doors, with consequent improvement in his health, and for the succeeding quarter of a century he devoted himself without hindrance to his chosen calling. Then appeared obscure symptoms of bodily ills, which, increasing in severity with the passing years, greatly handicapped him in his scientific labors and finally resulted in his death from pernicious anemia.

The foundation of William Brewster's life was an intense love of nature. Like some delicately adjusted apparatus, his whole being responded to the influences of the open. The phenomena of earth, air, and water were to him endless sources of enjoyment. Without creative artistic ability, he nevertheless had an artist's perceptions and keen appreciation of the charm of line, form, color, and composition in landscape. His feeling for nature, both inanimate and animate, passed, indeed, beyond the bounds of ardent admiration to a tender reverence; he was, in truth, a worshipper of nature. For plants, and especially for trees, Brewster had an interest and affection which found

expression in the garden of New England plants at his Cambridge home, and in the care with which he developed and protected the forests about his cabin at Concord.

But the first place in his heart was given to birds. They were for him the most eloquent expression of Nature's beauty, joy, and freedom. Only one blessed with that innate love of birds which is so inherent a part of his being that it grows with his growth, can understand how potent a factor in one's life this strangely sympathetic affinity with birds may become. Brewster, as has been said, was so situated that he could respond to this 'Call of the Bird.' Possessed not only with the desire, but also with the opportunity to gratify it, he had also other qualifications which enabled him to acquire an exceptionally full and intimate knowledge of the birds he met in life. His senses were unusually keen and discriminating, and showed no evidences of deterioration until his later years. He could hear and identify bird-notes to which the average ear was deaf.

Enthusiasm, combined with a passion for accuracy, made him a tireless and thorough observer and careful recorder of every detail of his observations. His journals doubtless cover a longer period more fully than those of any other American naturalist.

While Brewster's field-work was mainly restricted to New England, he made ornithological expeditions to the Gulf of St. Lawrence, Colorado, the mountains of West Virginia and North Carolina, lowlands of South Carolina and Georgia, and to Florida and the island of Trinidad, each trip resulting in additions to his collection and to our published knowledge of the birds of the regions named.

From 1880 to 1887 Brewster was assistant in charge of birds and mammals in the Boston Society of Natural History; from 1885 to 1900 he held a similar position in the Museum of Comparative Zoölogy at Cambridge, and from the last-named date to the end of his life he was, in effect, honorary or advisory curator of birds of that institution. His active curatorial duties, however, were connected with the development of his own museum. This, a fire-proof brick structure, perfect in all its appointments, was erected on the grounds of his Cambridge home. It contained his library and collection of North American birds, one of the best in existence. It also served as the meeting-place of the Nuttall Ornithological Club and was, indeed, headquarters for all bird-students of the Cambridge region.

While Brewster had a comprehensive and authoritative knowledge of North American birds and a scientist's interest in problems connected with their relationships and racial variations, he was not, primarily, a systematic ornithologist.

The labor he expended upon gathering his superb collection of North American birds is evidence of the value he placed upon specimens. But it was the bird in the bush, rather than in the hand, which most strongly attracted

him. A large proportion of his published studies, therefore, relate to living rather than to dead birds, to faunal and biographic, rather than to systematic ornithology.

The Index to the *Bulletin* of the Nuttall Club and to its successor, *The Auk*, covering the period from 1876 to 1900, has some 230 entries under the name of William Brewster. This was the period of his greatest activity. The index to *The Auk* for the following ten years, 1901 to 1911, contains only thirty entries under his name, though it should be added that some of his most important publications appeared after 1900.

While many of these titles relate merely to unusual 'occurrences,' there are among them original contributions to ornithology of the first rank. Notable among the more technical papers is the series describing the juvenal plumages of North American birds, in the study of which Brewster was a pioneer; the reports on Stephen's collections from Arizona and Sonora, and on Frazar's from northern Mexico and Lower California, a memoir on the latter collection forming a quarto of 241 pages.

Faunal papers on his expeditions to the Gulf of St. Lawrence, West Virginia, Colorado, North Carolina and Florida added much to our knowledge of the distribution of many of the birds treated, and they abound in biographical matter, while the classical 'Memoir' on 'Bird Migration' was, at the time of its appearance, the most important paper which had been published on that subject.

But Brewster's most characteristic and, in many respects, most valuable papers are on the habits of little-known birds or on the little-known habits of well-known birds. The habits of the Philadelphia Vireo, Swainson's and Bachman's Warblers, for example, were practically undescribed before he wrote of them, and to him we owe either the first or the best descriptions of the home life of the Prothonotary Warbler, Brown Creeper, Golden-crowned Kinglet, and of other common birds, of summer Robin roosts, and of the notes and flight-song of the Woodcock.

Brewster confined his field-work largely to New England, not only because he loved the land of his birth with an intense and increasing ardor, but because it was the great ambition of his life to produce a work on the birds of that region in which every species would be treated monographically. We can never cease to regret that his health prohibited the accomplishment of a task he was so preëminently qualified to perform. We may, however, be thankful for the extended annotations which he added to the edition of Minot's 'Land-Birds and Game-Birds of New England,' which appeared under his editorship, and particularly for the 'Birds of the Cambridge Region,' his most noteworthy contribution to faunal literature.*

This book was to have been followed by one on the birds of the Unbagog region on the New Hampshire-Maine boundary, where many of Brewster's

*See a review of this work in BIRD-LORE, 1906, p. 114.

most important studies were made, and which he had visited almost yearly since boyhood. The last years of his life were devoted to the preparation of this work, and, although he did not live to complete it, that portion which was finished should by all means be published.



PREPARING SPECIMENS IN AN IMPROMPTU
LABORATORY ON THE SUWANNEE RIVER
Photographed by F. M. Chapman, March 30, 1890

Brewster's thoroughness as an observer and his painstaking habit of recording his observations at length in his journal gave him a large fund of data upon which to draw for publication, but at this point his difficulties began. His passion for accuracy, his fear of producing an incorrect impression, either by faults of commission or of omission, in connection with his high literary standards, made the preparation of manuscript for publication a tedious operation. No trace of this travail of authorship, however, is apparent in the published results which stand as models of clear and finished composition.

Brewster did not often attempt to give full expression to that intense and reverent love of nature which formed the very fiber of his being, for the forced artificiality of 'fine writing' was abhorrent to him. Nevertheless, he could not, at times, particularly in his earlier years, resist the desire to share with others the supreme pleasure he derived in the study of birds in their haunts and the results form rarely beautiful contributions to the true literature of ornithology. Here, for example, is a quotation from his account

of an expedition for Prothonotary Warblers, made with Robert Ridgway at Mt. Carmel, Ill., in May, 1878. (Bull. Nutt. Orn. Club, 1878, pp. 160-162):

"In the hope of presenting to the reader's mind some slight idea of the general character and surroundings of the locality where the Prothonotary Warblers were found breeding in the greatest abundance, I close with a brief description of a visit, on May 11, to the cypress swamp. Towards the middle of the afternoon we reached Beaver Dam Pond, and embarked in an old weather-beaten dugout. Our guide, a half-breed Indian and a most accomplished woodsman, took his station in the stern, and, with a vigorous shove upon his long push-pole, sent the frail craft well out into the pond. Before us stretched a long, narrow sheet of water hemmed in on every side by an unbroken wall of forest trees. Around the margin grew a fringe of button-bushes, with a sprinkling of tall slender willows, while behind and above them towered the light-green feathery crests of numerous cypresses. . . . Wood Ducks and Hooded Mergansers rose on every side, while their broods of downy ducklings scuttled off among the water-plants, sometimes huddling close together, a dusky mass of bobbing little forms, at others, when closely pressed, separating and diving like water-sprites. Overhead, Buzzards were wheeling in graceful, interminable circlings, while in their nests upon the tops of some gigantic sycamores, a little back from the shore, stood a number of Great Blue Herons, their tall, graceful forms boldly outlined against the sky. From the lower depths of the forest came innumerable bird-voices,—the slow, solemn chant of the Wood Thrush, the clear, whistled challenge of the Cardinal, the sweet, wild notes of the Louisiana Water Thrush, the measured *pter-dle, pter-dle, pter-dle* of the Kentucky Warbler, and the emphatic song of the Hooded Flycatcher. Higher up among the trees Woodpeckers rattled upon dead limbs, a Tanager sang at intervals, the tufted Titmouse reiterated its monotonous *peto, peto*, and numerous Blue Warblers added their guttural little trills to the general chorus. From all along the pond edges came the sandpiper-like song of the Prothonotary Warblers. As we advanced, the button-bushes gave way to stretches of black-willows, which at the head of the pond formed the exclusive growth over an area of perhaps six acres. This tract had at one time evidently formed part of the pond, for as we pushed our canoe in among the trees we found the water scarcely shallower than in the open portions.

"Although the willows grew rather thinly, the spaces between the living stems were filled with stubs in every stage of decay, and perforated with countless Woodpecker-holes, most of them old, and long since given up by their original tenants. That a locality so favorable in every way had not been overlooked by the Prothonotary Warblers was soon evinced by the presence of the birds on all sides in numbers that far exceeded anything which we had previously seen, and careful search soon revealed a number of nests. Probably not less than twenty pairs were here breeding in close proximity. In the larger holes and among the branches were the nests of a colony of Grackles (*Quiscalus purpureus*), and a few Woodpeckers and Carolina Titmice were also nesting somewhere in the vicinity. As we returned down the pond late in the afternoon the sun was sinking behind the tree-tops. The dying breeze still agitated the crest of the forest, but not a breath rippled the still water beneath. The lonely pool rested in deep shadow, save at its upper end, where the slanting sunbeams still lighted up the group of willows, bringing out their yellowish foliage in strong relief against the darker mass behind. The arches of the grand old woods were filled with a softened, mysterious light, and a solemn hush and silence prevailed, broken only by the occasional hooting of a Barred Owl or the song of some small bird among the upper branches, where the rays of the setting sun still lingered. High in air, over the open space, the buzzards still wheeled and soared on easy wing. Ducks were scurrying about in all directions or splashing down among the lily leaves, and a heavy plunge in-shore told where a startled

otter had risen and disappeared. As the last rays of sunlight touched the top of a mighty sycamore that raised its towering head above its fellows, the Herons left their rookery and laboriously winged their way overhead to some distant feeding-ground."

Brewster was twenty-seven years old when this was written, and, while it rings with the enthusiasm of youth, his love of the out-of-doors increased rather than diminished, though he less often gave utterance to it in print, but, seasoned by years, it appears again in his 'Voices of a New England Marsh.*' How clear-cut, for example, is this picture of the birth of a Massachusetts spring, quoted from the above-mentioned article:

"Through the long New England winter the Fresh Pond marshes are encased in glittering ice or buried deep under a mantle of wind-sculptured snow. Flocks of Snow Buntings occasionally circle over them; Shrikes and Hawks of several kinds perch on the isolated trees to watch for prey; a few Red-winged Blackbirds and Meadowlarks come in at sunset to spend the night; Tree Sparrows frequent the alder thickets; and the extensive beds of cat-tail flags, bent down and matted together by the snow, afford shelter for numerous Song and Swamp Sparrows as well as for one or two Long-billed Marsh Wrens. On mild, calm mornings the Sparrows may be heard chirping to one another from the different covers and late in February the Song Sparrows sing a little in subdued, broken tones, but during most of the period when winter holds full sway the marshes are as silent as they are desolate.

"The awakening comes in March when the deeper pools and channels begin to show open water and the snow and ice everywhere are rapidly wasting under the ever increasing strength of the sun's rays. The Song Sparrows, Tree Sparrows, Red-winged Blackbirds and Rusty Blackbirds that have passed the winter further south arrive in force at this time, and at morning and evening, before the blustering northwest wind has risen and after it has lulled for the night, they fill the marsh with their voices. The Red-wings are scattered about, perched conspicuously on the topmost twigs of isolated shrubs or low trees, their sable forms sharply outlined against the light background of water, snow or sky, each bird flashing his scarlet epaulets in the sunlight for an instant, just as he swells his plumage and half opens his wings to utter his rich, guttural *o-ka-lée*. The Rusties pass and repass over the open in loose flocks, with undulating flight, or alight in the upper branches of the trees to indulge in one of their rather infrequent outbursts of tinkling medley-singing before descending to feed on the margin of some shallow pool fringed with button bushes or overhung by willows. The Song Sparrows, although less noticeable than the Blackbirds, by reason of their soberer garb and more retiring habits, are also constantly in sight, flitting from bush to bush or perching on some exposed twig to chant their sweet, earnest songs; but the wild, ringing, rapidly delivered notes of the Tree Sparrows issue, as a rule, from the depths of the thickets where the birds keep closely concealed. These voices, with, perhaps, the tender, plaintive warble of some passing Bluebird or at evening, towards the close of the month, the merry peeping of Pickering's hylas are the characteristic March sounds of the Fresh Pond marshes as well as of many similar places in eastern Massachusetts. How they soothe and refresh the senses after the long silence of winter, breathing to every one of refined sensibilities the very essence of early spring! To those who have long known and loved them they are inexpressibly grateful and precious, touching the chords of memory more subtly than do any other sounds, recalling past associations—albeit often saddened ones, and filling the heart with renewed courage and hope for the future."

*BIRD-LORE, 1902, pp. 43-56



THE CABIN ON THE CONCORD
Photographed by F. M. Chapman, 1892

This whole article, with its combination of exact description, touches of local color, and wholesome sentiment is an admirable example of Brewster's style.

One is tempted to make extended quotations from his writings, which, published in various scientific journals, have never had the audience that they merit, but I add only an extract from his essay on 'Bird Migration,' published as the first 'Memoir' of the Nuttall Club. Brewster was the first ornithologist in this country to make a definite study of bird migration from a lighthouse. From August 13 to September 26, 1885, he remained at Point Lepreaux, New Brunswick, living with the keeper of the light. On the night of September 4, there was a heavy flight of birds. Brewster remained in the lighthouse from ten o'clock until two the next morning. During this time about 200 birds struck the light. After giving the names of those that were identified, he writes:

"At the height of the *mêlée* the scene was interesting and impressive beyond almost anything that I ever witnessed. Above, the inky black sky; on all sides, dense wreaths of fog scudding swiftly past and completely enveloping the sea which moaned dismally at the base of the cliffs below; about the top of the tower, a belt of light projected some thirty yards into the mist by the powerful reflectors; and in this belt swarms of birds, circling, floating, soaring, now advancing, next retreating, but never quite able, as it seemed, to throw off the spell of the fatal lantern. Their rapidly vibrating wings made a haze about their forms which in the strong light looked semi-transparent. At a distance all appeared of a pale, silvery gray color, nearer, of a rich yellow. They reminded me by turns of meteors, gigantic moths, Swallows with sunlight streaming through their wings. I could not watch them for any length of time without becoming dizzy and bewildered.

"When the wind blew strongly they circled around to leeward, breasting it in a dense throng, which drifted backward and forward, up and down, like a swarm of gnats dancing in the sunshine. Dozens were continually leaving this throng and skimming towards the lantern. As they approached they invariably soared upward, and those which started on a level with the platform usually passed above the roof. Others sheered off at the last moment, and shot by with arrow-like swiftness, while more rarely one would stop abruptly and, poising a few feet from the glass, inspect the lighted space within. Often for a minute or more not a bird would strike. Then, as if seized by a panic, they would come against the glass so rapidly, and in such numbers, that the sound of their blows resembled the pattering of hail. Many struck the tin roof above the light, others the iron railing which enclosed the platform, while still others pelted me on the back, arms, and legs, and one actually became hopelessly entangled in my beard. At times it fairly rained birds, and the platform, wet and shining, was strewn with the dead and dying."

But Brewster's curatorial duties, his labors in amassing a representative collection of North American birds, which was always at the disposal of his fellow workers, and the preparation of his long list of publications by no means form the total of his contributions to the science of ornithology. He was one of the organizers of the Nuttall Club, from which grew the American Ornithologists' Union, and in the formation of that society he played a part of the first importance. He served as the Union's president from 1896 to 1898, and,

from its organization in 1883, was a member of its council, always intimately concerned in its proceedings.

Brewster's museum was the home of the Nuttall Club, and its meetings about the great open fire in the bird-room were a privilege of Cambridge birdmen which they will now value at its real worth. Brewster was president of the club, and, by virtue of his attainments, leader of the group; through these pleasant, informal gatherings he exercised a deep influence on the studies of



WILLIAM BREWSTER IN THE MOUNTAINS OF TRINIDAD, B. W. I.

Photographed by F. M. Chapman, April 7, 1894

his associates. To most of them, indeed, he had been a kind of ornithological godfather to whom they never appealed in vain for advice or information.

Brewster was at his best with boys, for whom the bird world was opening, treating them with the kindly considerateness which characterized his dealings with others. Their little problems received the same attention he gave to the larger ones of older men, and the youthful seeker for information left him with a feeling that he had found a friend as well as a preceptor.

In the campaign for the protection of North American birds, Brewster served in many important posts. He was a member of the Committee on Bird

Protection, appointed by the American Ornithologists' Union in 1886, and as such was one of the organizers of the first Audubon Society. He remained on this committee for years and later became a director of the National Association of Audubon Societies and president of the Massachusetts Audubon Society.

But no estimate of Brewster's work can be exact which does not take into account the character of the man. It was not alone the rare charm of his personality to which I refer, but the sincerity and unselfishness which formed so fundamental a part of his nature that no one who knew him could doubt the absolute truthfulness of his word, spoken or written, or the purity of his motives. Of simple tastes and direct manner, he had an intense dislike of anything approaching ostentation; but whatever he did must be well done, and he imposed on those in his employ the same high standards which governed his own actions.

Loving the solitude of wide spaces, Brewster was nevertheless a sociable man. He loved all that is fine in human intercourse, and his thoughtfulness for others, his sympathetic appreciation of and interest in their work, their joys and their sorrows made his friendship one of life's best gifts. But his kindness and generosity never for a moment made him untrue to his own sense of right and wrong. Neither actively nor passively would he lend support to a cause of which he did not approve, and no fear of consequences prevented him from making his own position plain.

Fortunate is the man who can number among his memories those of days afield with William Brewster. It is now twenty-eight years since we descended the Suwannee River in a house-boat, and twenty-six have passed since we camped in the forests of Trinidad. But the joy of Brewster's companionship and the pleasures which grew from his enthusiastic appreciation of our surroundings and experiences are my most cherished recollections of the expeditions.

I had been in Trinidad the year preceding our visit, and, in returning with Brewster, looked forward to introducing him to the birds and their haunts, as well as to the people I had met there with even keener enjoyment than I did in renewing acquaintance with them myself. There were no disappointments and many unexpected pleasures for us both, but I have always thought most frequently of Brewster's words after we had passed several days with an English official who was a worthy representative of his Queen and of the best traditions of his race. "I believe," said Brewster as we left our host's home, "that there is a nearly perfect man." I have never recalled this incident, during the quarter of a century which has followed its occurrence, without thinking how unconsciously deserving of this tribute was its author.

FRANK M. CHAPMAN.



"PEET-WEET"

The Spotted Sandpiper

By C. W. LEISTER, Ithaca, N. Y.

With Photographs by the Author

THE SPOTTED SANDPIPER is probably the commonest of the shore birds to be found along our streams. 'Teetering,' up and down, running quickly over the stones and logs by the waterside; or, with rapidly beating wings, sailing along just above the surface of the water, he is sure to attract your attention. The 'Tip-up,' furnishes much of the interest to be found in a walk along our streams and ponds. More active and energetic birds it would be difficult to find.

However, I believe that only a small number of bird-lovers are at all intimate with the home life of this Sandpiper. I was recently shown a beautifully situated nest, built on the boulder-strewn and rocky bank of a large creek, where there was barely enough soil to support the few sparse tufts of grass and the several small wild parsnips found there. By one of these parsnips the female had built her nest.

The nest was not a very pretentious affair, being a hollow in the ground rather indifferently lined with a few weed stems and leaves. The depth of the nest was very noticeable. Because of its simplicity, I expected to find it much more hollow. However, there is a reason for it being deep. The four sharply pointed, buffy eggs, thickly and heavily spotted or splotched with dark brown, particularly so at the larger end, completely filled the little nest. The eggs are placed in the nest with the pointed ends down; thus they fit together per-

fectly and occupy a much smaller space than by any other arrangement. It is undoubtedly a provision made by nature so that the large eggs may be covered well during incubation by such a relatively small parent.

Several pictures of the nest were taken, and a box supported by a few sticks was put up nearby, to be replaced later by the camera, after the bird had become accustomed to the presence of the box. After a few days the camera was put up and several good pictures were taken of the female incubating and settling on the eggs.



SPOTTED SANDPIPER SETTLING ON HER EGGS

I wanted to see how she would respond to changed conditions, so I placed my cap over the nest and awaited developments. She soon came quietly along through the grass up to where her eggs were covered, walked around and around the cap and also over it, not seeming to understand what had happened to the nest. No attempt was made to remove or creep under the cap. The nest was then covered with a large leaf. She soon returned, and to my surprise, sat down exactly in the middle of it. But the leaf did not feel just right to her, so she began turning herself around and around in the nest. After turning a dozen or more times, she seemed satisfied with the new order of things and sat quietly. I next removed the leaf and repeated the experiment

by placing small sticks across the top of the nest. On her return, no attempt was made to remove them with her bill but they were pushed aside with her breast when she settled on the eggs.

I wished to get a picture of the old bird standing on a boulder, and, as she occasionally went to one several feet away, I covered up the nest completely so that she would not find anything to sit on, and focused my camera on the boulder.

A flat stone was next placed over the nest, completely covering it and hiding it from sight. The female returned, as before, and, without hesitating, sat



THE SANDPIPER'S HOME

down on the stone. Then, not feeling the eggs under her, she got up and began hunting around for the nest. She made several turns around the nesting-site, always ending at the flat stone, and not finding the eggs, started the search anew. All the grass clumps within a radius of six or seven feet were searched. She tried incubating on the stone a few times but always got off after a moment. An interesting thing to note is that the female Sandpiper knew the exact spot where her nest ought to be, even though she could not see a trace of it. The stone was then removed from the nest, and when the bird came back again, she sat on the eggs as if nothing at all had happened. The male never came near the nest, although the female did a lot of excited peeping. No opportunity was presented to visit the nest again.

The Birds of Coblenz

By PERLEY M. JENNESS, 29th Engineers, 3d Army of Occupation

AT THE beginning of this brief sketch of the birds of Coblenz as the writer observed them in the four months, February to May inclusive, I would point out that my observations have been entirely casual. The times at my disposal have been such that I have lost the most valuable part of the day—the morning hours. Again, I have not been far afield, confining my wanderings largely to the immediate city, especially along the beautiful Rhine-shore promenade of over a mile in length. Here many species keep high up in the shade-trees, and, lacking a glass, satisfactory observations have been quite out of the question. From text-books I have learned a little, but have been handicapped here both by a limited knowledge of German and by a failure to find anything comparable to our bird-guides of the United States. Any assistance from the native people has been prevented by the military non-fraternization regulation. As a consequence of these circumstances, these remarks on the local bird-life must be considered very incomplete.

During February, winter conditions prevailed in the Rhineland. Much of the time the ground was frozen and there were several days when the temperature did not rise above the freezing point. Down in the valleys there was not as much snow as in the heights of the Eifel, Hundsrück and Westerwald, but even there the amount of snow on the ground did not exceed three inches at any time.

Winter bird-life during this period was much like that of central New England. Three permanent residents were common. The House Sparrows, or as we know them, the English Sparrows, were present everywhere, but in very much smaller numbers than they are to be found in American communities. Over here the House Sparrow does not appear to be regarded with disfavor, and seems nowhere so noisy and filthy as we know him. The Crow, or Raven, was seen about more or less, not differing in appearance and general habits from our familiar Crows. Another species present in small numbers—I have seen no more than three or four birds together here, and nowhere in my travels more than thirty or forty in a flock—is the Starling, which through importation and increase is becoming only too familiar in our eastern states. But here the Starlings are quiet and unobtrusive, only one or two to be seen here and there walking sedately about some lawn, or sitting in a shade-tree, occasionally giving forth a few of their unmusical notes. As there are no cattle in this region, I have had no opportunity to observe Starlings in this connection.

Of these species to be classed as winter birds, and which later disappeared, the Titmice, so closely resembling our Chickadee, were the most common. Nuthatches and Creepers, or Tree Runners as they are known here, very much like our American species, were also noted. Also, during the winter and early

spring, a species of Gull was seen more or less up and down the Rhine and Moselle rivers.

With the very early days of spring there appeared a pretty little bird which since has been the most common species in and about the city. The Chaffinch, not flocking, is to be seen almost anywhere, at any time, in yards, gardens, parks, and about the city streets. In appearance the Chaffinch is a sturdy little bird about six inches in length. Its song is a pleasing warble.

It was in March when I first noticed the Amsel, being attracted one day by a vigorous song, reminiscent of that of our Robin. The singer I found to be a black bird, about Robin size, with a yellow bill. It was the black Thrush, more commonly called the Amsel, which continued observation has shown to resemble the American Robin in all but appearance. Like the Robin they are seen about the city and suburbs, in the yards, parks, and orchards. They have the Thrush habit of singing at sunset.

Northward from Coblenz, where the Rhine Valley opens into the Neuwied Basin, are broad fertile fields interspersed with orchards. Here is to be found the Skylark, one of the two renowned European songbirds. In appearance this Lark is a camouflage in neutral grays and browns, harmonizing with the land. The roll-icking, bubbling song of the Skylark is given on the wing, the bird mounting higher and higher, singing ever more exuberantly, until at last, as if the bird were exhausted, the song ends suddenly and the tiny body dives back to earth. In addition to this song, the Skylark exhibits a fascinating adeptness as a wooer of his mate.

Comparable with the Skylark in renown is the Nightingale. Among the localities in Germany where the Nightingale is best known are the Rhine and Moselle valleys. Here this species arrives in late April and remains until November. Along the upper part of the beautiful Rhine Anlagen opposite the island of Oberwerth the tones of this wonderful singer are to be heard every evening and night. The Nightingale sings occasionally, but briefly, in the daytime. But it is not until the early evening, from seven o'clock onward that the voice of the Nightingale plays any prominent part in the bird-chorus, becoming conspicuous only as darkness gathers. Then it may be heard, one bird here, another there answering, the silvery tones ringing back and forth across the placid water of the lagoon, with a richness and mystery that holds the listener enchanted. A German told me that the Nightingale sings usually until toward midnight, then rests a while, sings again, and is at his best between one and two o'clock, rests again, and sings finally at sunrise. The song is given in separate phrases of a few seconds interval, separated by greater or less intervals. Each bird has a repertoire of some half-dozen or more quite different phrases rendered in varying order and successive renditions of the same phrase, varying in tone and length. Although such a wonderful singer, the Nightingale is very retiring in disposition and modest in appearance. The bird spends much time upon the ground and in low bushes, seldom mounting more than five or

six feet from the ground. This species is about the size of the Song Sparrow, with plumage in neutral brown and gray.

Germany has two species of Swallows, the Barn Swallow practically like ours, and the House Swallow, in appearance like the Tree Swallow but having the habits of our Eave Swallow. Both of these are to be seen in this vicinity, especially in the small villages, but over Coblenz a species of black Swift is very numerous.

Old World Warblers are neither so numerous nor so distinctively colored as those of the American continent. This fact, together with the circumstances of my observations and lack of suitable text-books has prevented me from making any identifications in this family. The handsomest Warbler I have seen reminded me much of our Cerulean.

Several species that I have heard have notes much like those of our Western Hemisphere representatives. Always in the city forest I hear many Cuckoos. A few times I have heard notes much like those of the Flicker. The Woodpeckers' notes are heard occasionally. Once I heard an Owl in the Royal Palace garden. High up among the shade-trees are heard songs resembling those of our Vireos, particularly the Warbling Vireo. There appear to be species corresponding to our Goldfinch and summer Yellow-bird as well as others.

Coblenz, June 20, 1919.





WHICH ONES HAVE BEEN FED?

A Visit with Cedar Waxwings

By F. N. WHITMAN, Chicago, Ill.

With Photographs by the Author

ON A TRAMP in the country early in May one may meet with a flock of pretty little Cedar Waxwings actively engaged in picking the buds from certain wayside trees and bushes. An incessant chorus of low, plaintive notes coming from two or three hundred of these dainty brown birds often attracts one's attention before he has noticed the flock. Although rather shy, the birds may be approached close enough to distinguish with the naked eye the delicate shading of their soft brown feathers, the tapering crests, the yellow band terminating the tail, and the small red structures on the wing, from which this species derives its name.

Several weeks later, these migrating flocks have separated into pairs, but it is often well along in the season before the birds build their nests, for the berries and fruit on which the young thrive ripen late. During summer, the Waxwings feed mainly on fruit, cherries, and all kinds of wild berries. When the young are old enough to be left alone, both adults go off together in search for food, frequently making trips of several miles. Whether on the wing or at rest, they habitually utter low calls that no doubt express companionship. Though their foraging flights take them a mile or more, they are seldom absent more than ten or fifteen minutes at a time, and when they are heard returning, the young set up a chorus. Except when they may occasionally



TWO RASPBERRIES AT A MOUTHFUL



WHO WINS?

mistake a passing bird for one of their parents and start precipitately to beg, the young remain discreetly silent while the old birds are away.

The present family of five young were not ready to leave the nest until the middle of August. The old Waxwings usually returned with two or three berries in the crop in addition to one in the beak. A large raspberry would be stuffed down a gaping beak, then, behold, another one miraculously appeared, and was held tentatively a moment before being fed to the next youngster. No amount of stuffing satisfied these hungry little beggars, which, flapping their wings, pleaded in the way natural to young birds.

The near presence of an unobtrusive visitor did not long prevent these Waxwings from proceeding with their home duties. After the first day, which



A HUNGRY FAMILY AND ITS PARENTS

was necessarily spent gaining the acquaintance of the family, many satisfactory photographs were secured without serious difficulty. The old birds would now and then fly around the camera to inspect this strange instrument, and, without the least fear, several times alighted on it. At other times they would sail back for a good look at me, where I lay about twenty feet distant, partly concealed in the tall grass, with thread in hand for releasing the shutter.

While photographing wild birds one has a splendid opportunity to study their home life and habits which he should make the most of, taking full notes of his observations at the end of the day's outing. It should not be concluded because Cedar Waxwings are relatively tame as compared with some other species, that obtaining satisfactory photographs of them is a matter of ease, uncoupled with skill and perseverance,

The Warbler in Stripes

By H. E. TUTTLE, Simsbury, Conn.

THE broken wing tactics employed by most birds in an endeavor to divert attention from the nest or young are at best a perfunctory performance: it is only occasionally that you discover a real artist. The usual offering consists in fluttering along the ground for a few feet, after which the dissembler flies quite easily into a tree, as if to assure his audience that the wing which was so obviously crippled a moment ago is now healed. If the female plays the tragic rôle, the male will frequently greet the miraculous recovery with a song, and the two will go about their business without the slightest shame for the inadequacy of their deception. But if the truly great tragedian is rare, his technique is the more appreciated by those whose sense of the dramatic has been outraged by so many mediocre melodramas.

The realistic portrayal of a great emotion does not seem peculiar to a single species, yet some species seem to emphasize different features of the part. The Ovenbird and the Rose-breasted Grosbeak, to select two examples from a large class, appear to have made a study of screaming, while the less vocal Mourning Dove contents herself with a palpitation of the wings. The Ruffed Grouse is an adept at covering the retreat of her young, and, if surprised at close range, will frequently rush at the intruder with spreading tail and threatening mien.

But among the nests that I have found whose discovery has called forth the clever dissimulation of many light-hearted deceivers, none has provoked greater admiration on my part than the convincing artifice displayed by a Black and White Creeping Warbler that darted out from the roots of a dead chestnut sapling as I passed close by on a June afternoon.

She struck the leaves with a slight thud and turned over on her side, while the toes of one upstretched leg clutched at the air and her tail spread slowly into a pointed fan. My first thought had been, "A nest, surely." My next, "A badly wounded bird." Deceived for a moment then, I turned a step in her direction. She lay quite still except for a quivering wing. I reached out toward her with a small stick and touched her side; she screamed pitifully; I stretched out my hand to pick her up, but with a last effort she righted herself, and by kicking desperately with one leg, succeeded in pushing forward a few inches. I reached again; she struggled on; but after a third vain effort I began to realize that she was making a fool of me, and fearing that I might miss the spot from which she had flown if I pursued her farther, I desisted and retraced my steps to the chestnut sapling. But having failed to lure me from her nest, like a true artist she did not admit the fraud, and still lay where I had left her, giving no evidence of recovery.

With some difficulty I found the nest, a well-concealed cup hidden under some strips of bark which had fallen from the dead tree and lay piled up tepee

fashion at its base. It was made of the ravellings of a chestnut's inner bark and contained five young. As I was then well freighted with the camera-hunter's equipment, I unburdened myself of the umbrella tent and set it up within focusing distance of the nest, intending to return before twilight to see if the bird had accepted it, and if so, to take some photographs from its shelter on the day following. Assured before nightfall that she was again brooding her young, I departed for home.

The paragraphist delights in his 'triumphs of bird-photography,' forgetting or ignoring the many baffling defeats that made those triumphs possible. I sometimes think seriously of making a scrap-book of these failures—two-



BLACK AND WHITE WARBLER AT ENTRANCE TO NEST

Photographed by H. E. Tuttle

headed monsters of ornithology, birds with no heads at all, blurred images of triumphs that might have been! My first day's photographs of this Warbler contained many such failures. The nest was so well sheltered from the direct light of the sun, and the shadow cast by the chestnut tree was so dense that snap-shots were out of the question, while time exposures caught the bird in motion and were hopelessly blurred.

Sitting in the blind, a scant two feet from the nest itself, the first intimation that I had of the Warbler's return was a peculiar scratching noise on the trunk of the chestnut tree overhead. Shortly after, the male came into view, hitching along head-downward like a Nuthatch. He circled the tree in a gradually descending spiral, approached the nest from behind the shelter of his winding

stair and stopped for a moment to reconnoitre, with his eye on the lens of the camera, before making his final advance. Here, had I focused on this spot, I might easily have pictured him, but I had chosen the nest itself as the objective and could only wait. All my pictures of the male were failures—he was a too swiftly moving sprite to fall a victim to an exposure whose recording glimpse had been retarded from penetrating the shadows where he had hidden his nest. More nervous in action, he was more fearless than his mate, and it was often his arrival with food for the young and his immediate decision to feed them that put a stop to the dilatory tactics of the female, who was inclined to perch aloft, voicing a monotonous protest to the publicity which I was giving to her domestic arrangements. Yet it was her indecision that gave me my only successful pictures.

After she had fed the young and had given them a most thorough inspection, she was loathe to leave; perhaps, having once braved the camera's eye, she was content to remain under its harmless gaze; perhaps she hated to abandon her offspring to its baleful glare; she may have been reflective or lazy; at all events she delayed her departure. With an eye cast occasionally skyward, or benevolently fixed on her fledglings, she whiled away the time. It was during these lapses that the lids of the camera's inner eye were silently opened, and, on a movement on her part, as silently closed.

In the meantime, the more industrious male was making three food trips to her one. The fare which he provided was composed entirely of small green caterpillars, cut up into half-lengths. The only peculiarity which distinguished these Black and White Warblers from others of their kind, aside from the faithful simulation of a crippled wing, was the habit before mentioned of flying directly to the nest tree and sliding down it, like inverted firemen hurrying to a blaze.

A Red-shouldered Hawk nested in a great pine tree whose shadow fell close to my tent's edge, but this freebooter hunted far from home, and the tenants of the chestnut tree were safe.



Notes from Field and Study

Two Interesting Observations

The results of two observations which I have had the opportunity to make recently of incidents connected with the lives of some Robins and Blue Jays have interested me so intensely that I think they might also appeal to some of the readers of BIRD-LORE.

The first of these observations resulted in a discovery, new to me at least, regarding the psychology of the breeding birds. During the summer a pair of Robins built their nest upon the ledge of my window, close up against the pane. Almost from the beginning they manifested not the slightest concern about my presence. Either they recognized the fact that I was friendly, or else the fact that the glass was a sufficient protection. Thus I sat within touching distance of the mother bird, except for the glass, and watched the familiar operation of nest-building.

Three eggs were laid on successive days, followed by a two-day interval, and then a fourth egg. Soon the first three hatched, and, at the proper interval, the fourth. The closest possible inspection (this point is important) of the fourth bird showed him to be just as ugly, as strong, as large, in fact, as perfect a bird as any of the others at their hatching. Only having arrived a little late, he was to that degree smaller than they had meanwhile become. Potentially he had as good a prospect of becoming a perfect Robin as any in the nest.

I now eagerly watched for the answer to a question which I had long been asking: "How do the parent birds know whose turn it is to get the worm?" The answer (with this pair) was soon given. They did not know. On each return of either parent to the nest (the father brought few worms and boasted much of what he did) all the babies stretched their necks and opened eager mouths. The most

convenient mouth got the worm. Sometimes one got it time after time in succession; then another would be lucky for awhile.

Now comes the pathetic but interesting part of the story, the part which casts doubt upon the intelligence of at least one pair of birds. Remember that birdling number four was a perfect baby, only smaller than the others to the extent directly due to his later arrival. As the heads reached for the worms, his, therefore, was more often not the nearest nor highest. The result, since the parents made absolutely no effort to secure fair division, was that he received less than his share. This resulted in his falling still farther behind and in turn securing still less.

Now had even the slightest effort been made to give him a little extra attention, he would have been as fine a bird as any of the four, but as it was he fell farther and farther behind the others through sheer starvation. Finally he became so weakened that his stronger brothers kicked him out of the nest onto the ledge. There he was utterly ignored and died. I could not try to help him because the opening of the window would have destroyed the nest.

Now why did not the parents make the slight readjustment of plans necessary to produce four instead of three children, since all would have been perfect? Does it indicate the blindness of instinct? Was this a special case of inefficiency in a pair of 'newly-weds' who would later be wiser? Does it indicate a lack of any real intelligence? The answer is interesting conjecture.

My other observation was so surprising to me that I wonder if it is unique. A pair of Robins recently built in a maple tree near the house. As usual, after completing the nest they left it for a few days unoccupied. During the time of vacancy a pair of Jays appeared to be interested in

their discovery of this nest, bothered around it considerably, and were finally driven away by the rightful owners who then set up housekeeping.

The contents of the nest were out of my sight, but things seemed to be going along smoothly. Several weeks later we found exactly under the nest, on a quiet day when there was no wind to explain the event, a baby bird which apparently had just fallen there. It was absolutely unable to fly and so could not have come from a distance, had not been there very long, as we knew, and there was *no other nest in the entire tree*. The incident occurred in the morning.

This little bird had just barely, almost to a day's development, reached the point where an ordinary observer would easily recognize its species. A day before (I have watched their rapid development) it might have been a little hard to name it. Today it was plainly and unquestionably a baby Blue Jay. There was no Blue Jay nest even in the vicinity of the tree. After a few days the nest, which had had all the customary care from the parent Robins, graduated a small family of unquestionable young Robins.

I have never heard of a similar case, but from these observations I personally can reach but one conclusion. That is, that these Jays, ever adaptable as all Jays are, had played a trick slightly suggestive of that used by the Cowbird, though not at all intentionally. The story would read like this:

Finding the nest perfect and unprotected, they had, despite its difference from their own, appropriated it. The Jays are sufficiently adaptable to make this conceivable at least. Having stolen the home, they had gotten as far as laying one egg there when the Robins returned, discovered them, and, strong in the faith of justice, drove out the intruders. The problem of the egg there, even though it did not match hers, might in an inanimate-appearing object like that not greatly disturb the mother, and she laid her own eggs beside it and incubated them together.

When the young hatched, they at first looked so much alike that they attracted no attention, for the differences between naked baby birds is very slight except in size; which here would not be strikingly patent. Thus the interloper shared alike the food-supplies and grew with his foster brothers until one morning the mother bird noticed something suspicious, a bristling of blue quill feathers beginning to appear upon one baby, and she recognized an illegal nestling. Then came prompt action, and the nest contained only little Robins.

It may be that my explanation is too far-fetched, but from what I actually saw of these birds I do not think so. I believe I have read the story aright. If not, who can?

To my regret I was unable to raise the little Blue Jay by hand. Perhaps he was injured internally by his fall; perhaps I failed in my feeding methods.—F. H. HODGSON, *Head of Biology Department, Montclair High School, Montclair, N. J.*

An Albino Robin

As several reports of albino birds have been made in BIRD-LORE, I should like to report an albino Robin which has been on my brother's place all summer, and less frequently on ours, which adjoins, though I saw it once in our bird-bath. I think it was a female, but the back was quite conspicuously white and the breast suffused with white. It came in April and stayed very constantly around my brother's house, so we thought it was nesting nearby, but we never saw it with young. Our houses have been closed for over a month, but a friend told me she saw it frequently during our absence.—ELLEN M. SHOVE, *Fall River, Mass.*

A Family of Screech Owls on Stuart Acres

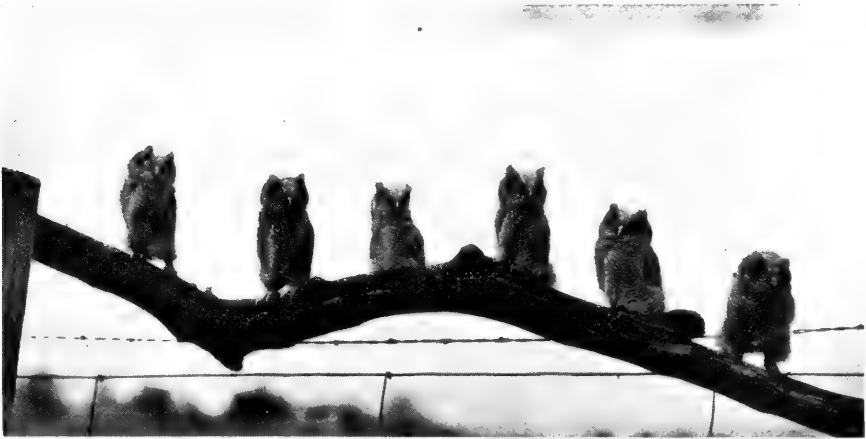
Purple Martins are not the only birds that appreciate the protection offered all useful feathered creatures on Stuart Acres; the Screech Owls also very soon

learned to like the comfortable bird-houses and Berlepsch logs placed for their especial benefit by the side of young apple and pear orchards, plentifully supplied with field mice (this latter provision not intentional however) for the sustenance of a large, rapidly growing family as shown by the accompanying photograph.

Since nearly 400 acres of Stuart Acres are devoted to young fruit-trees, the value of the Screech Owl as an orchard assistant is fully recognized, as examination of the owl nesting-boxes invariably shows the

much looking, I discovered the tiny nest, saddled on a lower bough of a living hemlock. She was evidently setting, and would remain motionless for a moment on her eggs. The nest was too high to peer into, but later in the season the empty nest was secured.

A nest discovered June 9, in the pile of old wood and débris at the foot of the cascade which descends some 150 feet over the rocky bed of the mountain brook in the western gulf, was again investigated. The sitting bird was flushed a



A FINE LINE OF SCREECH OWLS

Photographed by Dr. W. H. Rowland

remains of countless mice and other small rodents destructive to young fruit-trees.

The photograph here shown was taken May 15, 1919 in a young apple orchard. A bird-house of the Berlepsch log type has been occupied for several years by Screech Owls.—F. A. STUART, *Marshall, Mich.*

Bird Notes from the Lake George Region

While gathering mosses from the water in the head gulf in the deep wild-wooded ravine at the southern base of Peaked Mountain, in the lower Adirondacks, June 16, 1918, my attention was attracted to the whirring of the wings of the Ruby-throated Hummingbird, and, without

week ago and went off with drooping wings, feigning to be injured. The nest, placed in a little secluded nook in the débris near a larger stick, contained five creamy white spotted eggs. The nest was loosely made of old leaves, pine needles, and rootlets. Today young birds replaced the eggs, and in a minute or two the parent birds came about to feed the young. It was the Louisiana Water-Thrush, with the unmistakable white (!) line over the eye. In Eaton's 'Birds of New York,' this bird is not mentioned as occurring in Washington County; and I believe this is the first published nesting record of this austral species in the county. In Chapman's 'Warblers of North America,' second edition, the summer range of the Louisiana Water-Thrush is given as far north as

'New York (Lake George, May 8, 1877 and May 16, 1881)'. According to Eaton, this must have been at the head of Lake George in Warren County. Lunch was eaten on the rocks of the cascade three or four rods above but in plain sight of the nest; but the parent birds refused to approach to feed the young, and kept up an almost incessant alarm note. Evidently the female bird was the less fearless, coming to within two or three feet of the nest on a large stick in the debris; yet she would approach no nearer.

Near the lower end of Big Notch, in the Putnam Mountains, north of Peaked Mountain, in southern West Fort Ann, a pair of Canadian Warblers, with their necklaces of black streaks was seen June 27, 1918. They were very much alarmed at my presence in this wild, rocky, unfrequented spot, and so uneasy that they must have been nesting somewhere about. This would be another new nesting record for Washington County, although presumably the birds have always nested along the wild, broken mountain ridge between Lake George and Lake Champlain. The Canadian Warbler is a common summer resident in Essex County, and also a summer resident among the mountains of Warren County.

On the morning of November 4, there was a flock of six Evening Grosbeaks in the maple trees about the house, but they have not been seen since. The winter of 1918-1919 was exceptionally mild. Early in the winter a Northern Shrike was about, and occasionally there was a flock of about 100 Starlings in the orchard trees. There was a noticeable scarcity of White-breasted Nuthatches again, as last winter; and probably only one pair came for suet and chopped peanuts occasionally. I cannot account for the scarcity of the Nuthatches, as during winters previous to 1917-1918 they had been almost as abundant at the feeding-baskets as the Chickadees. Have others noticed the scarcity of the White-breasted Nuthatch, or is it merely a local condition?

Prairie Horned Larks came back in January to 'sweet cheerie' over the bare

fields; and a fine flock of Redpolls were about nearly every day, gleaning weed seeds or the seeds from the black birch tree at Glenwood wood's margin. A Robin came to the garden crab-tree the morning of January 28, and was also there most of the following day, sunning himself and feasting on frozen apples. He was seen again the afternoon of February 14 during a rain and sleet storm.—STEWART H. BURNHAM, *Hudson Falls, N. Y.*

A Red-Eyed Vireo's Nest

I am a Japanese student now at Ithaca and have become interested in your American birds.

Recently I discovered a nest of the Red-eyed Vireo near here, and after much



RED-EYED VIREO WORKING
ON ITS NEST

effort succeeded in obtaining the photograph here enclosed. The nest was located about ten feet high in the outer branches of a tree, but fortunately the tree grew in a gorge, the rim of which was near to the nest. I therefore set up my camera close to the nest, and, with the aid of a thread release, photographed the bird and nest.

Almost every time the bird came back to her nest, she brought some white stuff

in her bill and was fixing the nest.—S. USHIODA, *Ithaca, N. Y.*

Hooded Warbler on Long Island

I recently made a bird-record which seemed rather unusual to me, so I am sending it to you with permission to use it in BIRD-LORE if you wish to do so.

On the morning of August 22, I was delighted to make the acquaintance of the Hooded Warbler, which I had hardly hoped to see on eastern Long Island. It was beside a bush-grown path on a wooded hillside, just above a little valley. For about a half-hour it was in sight, darting from twig to twig, picking insects from the leaves, and bathing in some water in a hollow stump. The light was perfect and the bird, part of the time, only fifteen feet from me, so that the markings were plainly visible both with and without glasses. The plain greenish upper parts without wing bars, clear yellow under parts and forehead, black cap and bib with the connecting black strap, and white in some of the tail feathers were all distinctly seen.

The bird was accompanied by four or five Redstarts, three or four Black-and-Whites, a Canadian Warbler, an Ovenbird, and a Northern Water-Thrush, while a Blue-winged Warbler was seen not far away. The day was the second or third very warm one following cooler weather. It is my theory that the Hooded Warbler might have strayed up from the South and met this group of migrating Warblers that had started down from the North during the cool wave.—MABEL R. WIGGINS, *East Marion, N. Y.*

Is the House Wren a Bigamist?

Is the House Wren a bigamist? I have eight boxes around my place, on peat-trellis, trees, woodshed, and house porch, etc., all occupied, but I have noticed only two male Wrens singing. I cannot keep track of their movements, but there seem to be fewer males than females.

The English Sparrow is a brute; he puts his head in the hole of the box and

pecks the young birds, not minding the fighting of the parent Wrens.

One Wren-box has a Robin's nest on top of it, and year after year the two families dwell in harmony.—E. I. METCALF, *Foreston, Minn.*

Red-Headed Woodpecker Nesting on Long Island

It may be of interest to know that Red-headed Woodpeckers have nested this season in the dead limb of a maple tree on our main street. They were first seen and heard about May 20. The tree where they are nesting is opposite my sister's home, so we see the birds daily, but as yet have seen no young. The old birds fly to the ground near her front-porch for crumbs which she throws out.—E. M. LOWERRE, *Southold, N. Y.*

From Ames, Iowa

The most nearly perfect albino Robin I have ever seen visited me a few weeks ago. All the feathers were snowy white except the rosy breast and one dark tail feather.

The White-crowned Sparrow has been seen here on the campus this year and also the Blue Grosbeak. These are not common in the vicinity of Ames.—MRS. F. L. BATTELL, *Ames, Iowa.*

Brewster's Warbler in Iowa

On May 11, while observing the migrating Warblers in a small wooded region at Devil's Glen, along Duck Creek near Bettendorf, I noticed a number of Golden-winged Warblers. After watching these and other species of Warblers, I discovered a bird with yellow crown and wing bars, black line through the eye and underparts uniformly light, without the black throat patch of the Golden-winged. Later I saw another similar one, although this may have been the same one observed before. On looking up the description after my return home, I found that it was Brewster's Warbler, but noticed that this

was said to range only as far west as Michigan. The illustration in the 'Warblers of North America' is identical with my observation of this bird.—HUGO H. SCHRODER, *Bettendorf, Iowa.*

Hummingbird Photography

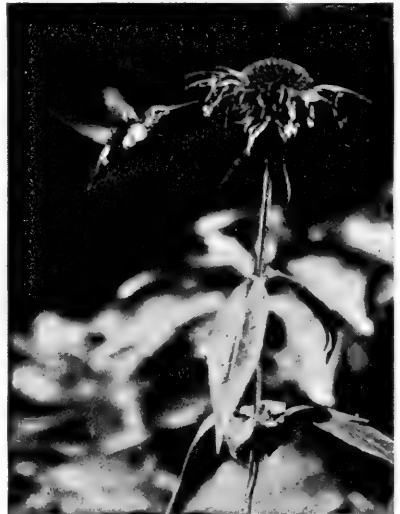
The accompanying photographs of a Ruby-throat feeding at a wild bergamot give an approximately accurate idea of the speed of the bird's wing-beat. The first picture was taken with an exposure of $1/750$ of a second. In it the beat was faster than the shutter and the outline of the wing is blurred. In the other photo-

healthful hours. This year all is changed. My place has been usurped and I am afraid to go near my favorite seat for fear of being insulted or scolded. These usurpers are a pair of Phœbes which have built their nest directly over the front door, and they fully believe that the surrounding property belongs to them and to them alone. Each time that I come to the door, they perch on a beam and use the strongest kind of language. If that does not succeed in driving me away, they make short flights at me and snap their beaks, hoping that in some miracu-



HUMMINGBIRD PHOTOGRAPHED IN
1-750 OF A SECOND

Photographed by H. H. Beck and V. E. Dippell



HUMMINGBIRD PHOTOGRAPHED IN
1-1000 OF A SECOND

Photographed by H. H. Beck and V. E. Dippell

graph the shutter, at $1/1000$ of a second, is obviously quicker than the beat, for the wing is perfectly clear in outline.

The photographs were taken at Mt. Gretna, Pa.—HERBERT H. BECK and VICTOR E. DIPPELL, *Lancaster, Pa.*

Interlopers

There is a porch on the front of my house, which, in warm spring and summer weather, I always enjoyed. There I took my work, sewing or writing as the case might be, and spent many profitable and

lous manner they may catch me as they do a moth.

When we first came to the farm, in the early spring, I did not realize that our porch had tenants. I went gaily in and out until an uneasy feeling of being watched made me turn, and I saw, sitting on a branch only a few feet away, two gray-breasted birds gazing reproachfully at me. That was before the scolding period. At once I saw the nest and knew that the little eggs must be getting cold. I could not be responsible for murder, so I left the porch to my tenants and only on rare

occasions ventured forth. The side door was now my entrance and exit.

Finally the eggs hatched. Four small, squirming objects now occupied the attention of the father and mother. Such exciting sallies after choice tid-bits for their brood as I witnessed—a snap of the beak and a fluttering moth would be captured and carried to the nest. Sometimes when they caught a glimpse of me they would give a chirp and a swallow and the moth was gone. The little ones lost their morsel at such times.

It was a lovely sight to see the way the pair worked together. Almost every moment they were coming or going, and when not in motion they always sat side by side. I wished that I might bring a few human married couples whom I know to watch the devotion of these tiny mates.

The little scrawny things grew fatter and fatter, and they piled one on top of another in the little nest, a bundle of feathers with eight bright eyes. One morning as I carefully walked out under the nest, there was a whirl of wings and the four fat fledglings started with one accord (one of them, incidentally, alighted on my head) to join their parents in the tree. They flew perfectly, much to my surprise, as they had never attempted to move before. When I hear of the student aviators who are obliged to practise day after day and often meet their death, I shall think of the little Phœbe birds which flew away one day without knowing how or why. They were called and they responded. After all, science is only an adaptation of nature. The wonder is that men did not accomplish many of the adaptations years ago.

Later in the day we were walking in the woods when we heard familiar voices. There was the family. The father and mother were calling, calling, and the little ones were following, following. We shall not see them again this year, but next spring Mr. and Mrs. Phœbe will doubtless find a new corner on our porch in which to build a nest, and we will gracefully but rather grudgingly yield the right of possession to them.—M. E. FABENS, *Georges Mills, N. H.*

Food of Young Purple Martins

During the summer of 1917 a gentleman wished me to photograph his Martin-house, towards evening, when the Martins were clustered upon it in some numbers. I was on hand an hour too early and found the adults still coming in with food for the young that had their heads hanging out of nearly every compartment. About fifteen pairs were using the house. The food at this time was composed entirely of dragon-flies, and had been for some time as the owner attested; and the ground below was covered with the bodies accidentally dropped by either young or old during the process of feeding.

I suppose it to be a well-known fact that the Martins feed their young dragon-flies, but I gathered a few facts that I have not yet seen in print. The adults came from a long distance, and as I was seated part of the time on the roof of a barn level with the height of the Martin-house and only fifteen to twenty feet from it, I had an excellent view of the proceedings. The dragon-flies were of half a dozen or more species, I discovered from the dropped specimens, and of two general sizes. The smaller ones were mainly *Diplax rubicundula* and *Leucorhinia intacta* while the larger ones were mostly *Anax junius* and some that I took to be *Epi-aeschna heros*; these last with a three-inch body and a wing-spread of over four inches. The birds returning with food had either two or three of the smaller ones or else just one of the larger in their bills. It was a revelation to see a young Martin swallow a three-inch insect with stiff wings that spread over four inches, which they did head first, with three 'gulps,' the wings folding back to the body as the insect went down.

Here are the two most interesting facts noted. First, the large dragon-flies all had their heads broken or pulled from the thorax, but still hanging by a single white ganglion or cord, otherwise in perfect condition, while none of the smaller ones were so mutilated. This was evident not only by the examination of many dropped

insects, but also could be seen with a glass when a bird alighted on her shelf. Secondly those birds returning with a bill full of two or three of the smaller species flew direct to their young and crammed the insects into the expectant mouths; while those carrying a single large one *always* dropped it when within fifty feet of the house, and then swooped down and caught it again before it had fallen ten feet. I assume this was done to secure the correct hold necessary to start it down the throat of the young head first, for I could not discover that it had anything to do with the 'broken necks.'—E. A. DOOLITTLE, *Painesville, O.*

An Old Squaw Joker

On Sunday, November 4, 1917, I was looking about the lake for what I might see in the line of water birds, and during the course of my hunt visited a flood pond on the beach. This pond, a hundred feet or so from the edge of the lake, was about 150 feet long by 25 feet wide and not over a foot deep anywhere. A small boy and a dog were at the edge of the water, and, seeing me with the bird-glass, said, "There was a Canvasback Duck here just now!" I told him I should have liked to have seen it, and he replied, "Oh, he'll come back—here he comes now," and sure enough a large Duck was seen swiftly approaching from over the lake and soon plunged down in the shallow pond. Not a Canvasback, however, but an adult male Old Squaw in winter plumage. "Sic him," said the boy, and away went the dog on a mad run through the shallow water, the Duck waiting till the dog was nearly upon him before taking wing and flying far out over the lake, only to circle at last and come back to the pond. This was kept up all the time I remained in the vicinity, and the boy told me he had been at the same game a long time before I arrived. The pond contained no fish, nor much else in the way of food, although I did note some large 'polly-wogs' there in August. There may have been an attraction there dear to an Old Squaw, but not apparent from a

human viewpoint; still I like to believe the Duck was enjoying the sport as well as the dog and boy. Otherwise, I cannot understand why, with all of quiet Lake Erie before it in which to fish and feed, this Duck (which should have been made wary by the open shooting season) took such long chances. Yet he had lived long enough to put on adult dress, with elongated tail feathers.—E. A. DOOLITTLE, *Painesville, O.*

Breeding of the Myrtle Warbler at Webster, Mass.

Perhaps the most interesting event of my field-work during the season just closed is the finding of the nest of the Myrtle Warbler on May 17, 1919, at Webster, Mass.

I saw the female Myrtle Warbler carrying nesting material into a group of white pines that stood on the edge of a pine grove of two or three acres. This grove adjoined an open pasture. After considerable search I located the nest 40 feet up in a good-sized white pine. It was near the top of the tree. On May 29, my friend, E. H. Forbush, and myself climbed this nest-tree and found two eggs in the nest. The female Myrtle Warbler sat on her eggs and did not fly until the nest-limb was jarred. She remained close by in this foliage, as did the male, during the time we were in the tree.

The nest was out 10 feet on the limb and was snugly set in a semi-vertical crotch. It was built of rootlets, straws, etc., and was thickly lined with hens' feathers. The eggs were speckled, chiefly at the large end, and had a background of grayish white. The nest was deeply cupped and its edge all around was built to overhang the interior slightly.

This nesting of *D. coronata* (a bird of the Canadian fauna) in southern Worcester County, Mass., on the Connecticut state line, in transition country is of interest. (In a nearby laurel swamp a Hooded Warbler was in full song!) It should also be added that while the Myrtle Warbler has long been known to be a summer resi-

dent of many of the elevated parts of Massachusetts, although less numerous than either the Magnolia or Black-throated Blue Warblers, this Webster breeding of the bird appears to be the first recorded case of the actual nesting of the species in the state.—JOHN A. FARLEY, *Boston, Mass.*

Bird Migration in Ontario

One of the first acts of the Hamilton Bird Protection Society, which was recently organized at Hamilton, Ontario, Canada, and which is now a member of the National Association of Audubon Societies, was to compile a list of the dates upon which the migratory birds were first observed in its district this year. Members of the society handed in records of their observations, and a list of seventy species was published in the local newspapers. The society intends to compile a similar list each year, and hopes that future lists may be more complete. This list, which follows, may interest some of the readers of BIRD-LORE:

February 25th, Robin; 27th, Flicker.

March 5th, Bluebird; 7th, Pine Grosbeak; 9th, Song Sparrow; 16th, Meadowlark, Killdeer, Bronzed-Grackle; 26th, Red-winged Blackbird, Cowbird.

April 6th, Phoebe, Yellow-bellied Sap-

sucker; 13th, Chipping Sparrow; 19th, Vesper Sparrow; 21st, Ruby-crowned Kinglet, White-throated Sparrow; 22d, Brown Creeper; 24th, Towhee.

May 2d, Nashville Warbler; 4th, Hermit Thrush, Baltimore Oriole, Myrtle Warbler, Black-and-white Warbler, Magnolia Warbler; 5th, Least Flycatcher, Brown Thrasher, Ovenbird, Yellow Warbler; 6th, American Goldfinch, Catbird; 7th, Kingbird, House Wren, Barn Swallow; 8th, Bobolink; 14th, White-crowned Sparrow, Yellow-throated Vireo, Maryland Yellowthroat, Blackburnian Warbler, Black-throated Blue Warbler, Bank Swallow, Redstart; 15th, Ruby-throated Hummingbird, Chestnut-sided Warbler, Palm Warbler, Scarlet Tanager; 16th, Canadian Warbler, Redheaded Woodpecker; 18th, Wilson's Warbler, Indigo Bunting, Belted Kingfisher, Wilson's Thrush, Cape May Warbler; 19th, Purple Martin, Night-hawk, Rose-breasted Grosbeak; 21st, Olive-backed Thrush; 23d, Spotted Sandpiper, Great Crested Flycatcher; 24th, Chimney Swift; 25th, Black-throated Green Warbler, Bay-breasted Warbler, Red-eyed Vireo, Warbling Vireo; 26th, Parula Warbler; 27th, Tree Swallow, Wood Pewee, Great Blue Heron; 30th, Bank Swallow.

June 1st, Yellow-billed Cuckoo.

THE SEASON

XV. June 15 to August 15, 1919

BOSTON REGION.—Except for several sudden changes in temperature, the weather the past summer has been normal, without unduly protracted periods of heat and high humidity, and with a fair amount of rainfall furnished by gentle summer storms in place of the violent and often destructive thunder showers.

The birds about the town centers show a marked decrease in number. This change is due, doubtless, as Dr. Allen suggests, to the spraying of the shade-trees which has been responsible also for the complete disappearance from our gardens of the

tree-cricket (*Oecanthus niveus*). Some species, notably the three Vireos—the Warbling, the Yellow-throated and the Red-eyed—the Wood Pewee, and the Yellow Warbler, compared to their abundance ten or fifteen years ago, are at the present time rare. The Warbling Vireo is sadly missed, for, with its practical disappearance from the elms bordering Lexington Common and the main streets of the town, very few individuals are left in this vicinity. Rose-breasted Grosbeaks and Baltimore Orioles seemingly have suffered little.

That a gradual change in the distribution of the Thrushes is taking place in eastern Massachusetts, or at least in the country about Lexington, is apparent to those who can compare present conditions with those obtaining in the early nineties. Mr. Walter Faxon tells me that twenty-five and thirty years ago, Wood Thrushes bred regularly in many suitable localities in Lexington, while at that period the Hermit Thrush was unknown as a summer bird here. For the past few years, however, we have found Hermit Thrushes breeding in several places in Lexington, Lincoln, Bedford, and Burlington (adjoining towns), indicating, it seems to us, that this species has replaced the Wood Thrush which is now one of our rarest birds. Two other species which we have noted in increased numbers in 1919 are the Prairie Warbler and the Grasshopper Sparrow. The Warblers find breeding-grounds on the tracts of land recently cleared by fire or gypsy moths.

The first indication of the autumn migration was on July 29, when the notes of migrating birds were heard in the night.—WINSOR M. TYLER, M.D., *Lexington, Mass.*

NEW YORK REGION.—The present season the regular breeding birds have been with us, certainly in their usual abundance. But the writer did not meet with a single Yellow-throated Vireo. It was not many years ago when this Vireo was a not uncommon breeding species here, but it now seems almost gone. Hermit Thrushes have been more in evidence than usual on eastern Long Island, their most southern sea-level nesting station, where they are still (August 11) singing freely. As usual, however, the nesting and song season has waned rapidly, and now one may go afield and see very few birds. What becomes of them during the period of molt offers interesting problems; Grackles, for instance, were almost entirely absent during the month of July, the first flock seen again in the beginning of August. Already a few of the migrating land-

birds are returning, the first of these, the Tree-Swallow, having been numerous for a couple of weeks. But interest in returning migrants at this time centers about the water-birds, more particularly the shore-birds. This year, at the Long Island south-shore 'meadows,' I identified my first returning Least Sandpiper on July 5; a flock of Lesser Yellowlegs on July 13; two Dowitchers with a large flock of these on July 19; a Greater Yellowleg on July 20; A Ringneck Plover, two Stilt Sandpipers, and the first Semipalmated Sandpipers on July 26; Black-breasted Plover on August 3, and Pectoral Sandpipers on August 9. Some of these species are a little earlier, some a little later than usual. In general, the shore-birds are more than usually abundant and represented by a greater variety of species, but, on the other hand, it is surprising that the Jack Curlew has been missed to date, and the Semipalmated Sandpipers were few and late in coming.

The regularity with which early south-bound shore-birds return is remarkable, though unlike certain of the Gulls and Ducks they seem never to leave non-breeding individuals behind to spend the summer here. The hypothesis which seems best to explain their movements is that there is a definite turning-point in their year very nearly coincident with the first shortening days, up to which they can successfully undertake to rear a family in the north, before which they are constantly moving northward towards their often distant breeding-grounds, and at which definite date all birds not involved in family cares turn southward again. Once moving to the south, it is remarkable how quickly they cover the distances and appear in comparatively low latitudes. I remember a Greater Yellowleg, about a dozen Lesser Yellowlegs, as many Least Sandpipers, and a couple of Semipalmated Sandpipers, with Black-necked Stilts in Porto Rico on July 27.

For a short period in late summer Spotted and Solitary Sandpipers frequent the meadows more than is generally supposed, feeding in the same dead patches

and pools between the grass that Yellow-legs love. On a certain piece of salt-meadow, facing brackish Moriches Bay, several Spotted Sandpipers were observed at the beginning of July and for the first time I was able to verify a suspicion that the diagnostic and peculiar method of flight which this species uses in coursing low over the water and along the shore is not always employed under other circumstances. Individuals flying low over the meadow grass sometimes used this same flight and again flew in a swift, darting manner, whereas flying at considerable height they moved their wings steadily like a diminutive Yellowleg. My first Solitary Sandpiper of the season was observed on the morning of July 30, flying about high in air by one of the harbors of Long Island Sound. Since that date, every visit to the particular south-shore meadow referred to has shown the Solitary to be present there, probably upwards of a half-dozen birds on August 9 and 10.—J. T. NICHOLS, *New York City*.

PHILADELPHIA REGION.—Weather conditions averaged about normal for June and the same statement holds good in regard to the bird-life in this region. Two Herring Gulls noted June 8—the only record the writer has for this month at Camden—and a flock of four Mergansers that lingered until June 9 can be mentioned as two interesting features.

While July averaged normal as far as temperature was concerned, the precipitation for the month exceeded all records of the local Weather Bureau, 10.30 inches being recorded. However, the abundant showers seemed to have no apparent effect on the most conspicuous July migrants, the Swallows, the daily movements of the birds being carried on without any regard to weather conditions. On July 20, when showers were particularly heavy and frequent, loose flocks of Barn Swallows were noticed headed due southeast through the pelting rain, seemingly heedless of the storm.

On July 4 the only colony of Common Terns known to the writer to be breeding

on the New Jersey coast was visited and found to be in anything but a flourishing condition. Only eight nests, all with eggs, were found and few adult birds were seen. A pair of Piping Plover, also known to nest on the island, was observed. Early in July two years ago there were at least fifty pairs of Terns, two pairs of Piping Plover, and a pair of Black Skimmers breeding on the island. It was evident that the high tides of the previous week had destroyed some of the nests, but it was also apparent from the numerous tracks of a barefoot boy, winding in and out among the dunes, that the nests above the tide had been robbed by one of the family of eight children who live on the island. On questioning them, they pleaded ignorance of having any knowledge of the birds nesting there.

Here is an opportunity, that is passing, to establish a bird and game refuge on one of the few remaining islands on the New Jersey coast that is not occupied by summer cottages. As a preserve it would not only protect the breeding birds but also serve as a refuge for migrant shore-birds and water-fowl.

A pleasing contrast to the Terns was the abundance of Laughing Gulls. These birds are now firmly established and are a common sight at most any of the numerous coast resorts, a refreshing change from ten or fifteen years ago when they were by no means common. At Stone Harbor, N. J., July 20, a flock of about 1,500 Laughing Gulls were gathered on the marsh near the road. Among them was a good scattering of young birds, some with down still clinging to their heads. The 'laughing' of the Gulls could be heard a mile and a half distant. On the same day an Egret was discovered feeding in a shallow lagoon, and Mr. C. K. Roland found two Black Skimmers flying about above the beach. All of which would lead us to believe that a touch at least of the former abundant bird-life is slowly returning to the Jersey coast.

The first influx of nearby Warblers was observed August 2.—JULIAN K. POTTER, *Camden, N. J.*

WASHINGTON REGION.—During June and July, as at all times of the year, the many parks and numerous shade trees of the yards and streets attract birds of many species into the city of Washington. The Cardinal is a regular and welcome visitor and is almost continually in song. The Flicker and Red-headed Woodpecker may be heard calling in many places, particularly in the parks, although the latter is much more local. The Tufted Titmouse and the Blue Jay are also frequent callers, while to even the more retiring birds like the Screech Owl, the Yellow-billed Cuckoo, and the Wood Pewee, the city likewise offers attraction. The same is true of the Wood Thrush, which, this year, continued singing up to the last day of July.

Our old friend, the Carolina Wren, after a period of nearly two years, during which it has been very scarce in this vicinity, has once more fully regained its former abundance, and its ringing song is again daily to be heard in the city as well as in the country districts. During the past few years several species have been steadily on the increase in the region about Washington, this being particularly true of the Mockingbird, the Robin, and the Migrant Shrike.

Of unusual occurrences we have now but one to record, that of the Pied-billed Grebe, which was seen on June 10 by Mr. R. W. Moore. This date is nearly a month beyond its previous latest spring date for the vicinity of Washington, which is May 12, 1909.

Purple Martins have again returned to roost in the city, much earlier this year than ever before. The following notes on their occurrence have been furnished by Miss Marion Pellew. She first noticed them on June 27, when they gathered soon after sunset in the vicinity of Fourth Street in the Mall. On this day, as subsequently, they roosted in the elms and maples along the street-car tracks on Fourth Street in practically the same place as in 1917. On this first day there were only about 1,000 Martins, but probably twice as many Purple Grackles, and about 100

or more European Starlings. The number of Martins remained about the same until July 4, when it increased to between 3,000 and 4,000. By July 28 the number was estimated at 25,000, and on this date there were also some Bank Swallows roosting with them. Their general behavior was much the same as in previous years, and this Martin roost forms, as heretofore, one of the most attractive summer bird exhibits in this region.—HARRY C. OBERHOLSER, *Biological Survey, Washington, D. C.*

MINNEAPOLIS REGION.—Two pairs of Wilson's Phalaropes are settled at the Long Meadow sloughs, ten miles from Minneapolis. They are apparently nesting there. The return of this beautiful bird to this locality, after many years of absence, is an unexpected and pleasant surprise. On June 18 a visit was made to a nesting-place of many Great Blue Herons and Double-crested Cormorants on a heavily wooded island in Upper Lake Minnetonka, about twenty miles from the city. Repeated requests for the destruction of this colony have been made of late years by various persons who consider these birds injurious to fishing interests and a general nuisance, but Mr. Avery, Game and Fish Commissioner, has turned an indifferent ear to these petitions thus far. Most of the many summer residents about the lake, with the exception of the owners of the beautiful island possessed by the birds, object to the heronry being disturbed on the ground that its occupants add a picturesque and interesting feature to the lake.

Heron Lake.—June 20 to June 26. This period was spent at Heron Lake in the southwestern prairie region of Minnesota, collecting material for a large bird group to be installed at the university museum. Mr. H. C. Oberholser, of the Biological Survey, was present part of the time. We found the water unusually high, the level of the lake being three feet or more above the usual line. Heron Lake is a shallow body of water, some fourteen miles long by two or three miles wide, the northern half largely overgrown with quill reeds

bulrushes, and coarse grass, and producing an abundant crop of wild celery each year. It has long been famous for the large numbers of water-birds that breed there and still larger numbers that congregate there in the spring and fall during migration. Many species of ducks formerly bred there, but of late years they have been greatly reduced both in kinds and individuals. The species found this year were the Blue-winged Teal, Mallard, Pintail, Red-head, Wood Duck, Hooded Merganser, a single pair of Ruddy Ducks, and one each of the Lesser Scaup and Green-winged Teal, the frequency of their occurrence being about in the order given. None was really common. The high water had destroyed the nests and no young birds were seen. The Ruddy Duck was once abundant and the cause of its disappearance is a mystery. While a few of the Wood Ducks and Hooded Mergansers probably nest in some of the scarce willow stubs about the lake, it appears certain that they resort, for the most part, to cavities in the low banks of the willow-fringed tributary streams. One Wood Duck's nest has been found thus situated.

A male Wood Duck that was about one-half molted into the eclipse plumage was shot on June 23, and a Mallard on June 24, in the same condition. Both were a-wing. This seems surprisingly early for this change to occur. It apparently takes place slowly and anticipates the loss of the flight feathers.

Coots and Florida Gallinules were abundant and at this time had both fresh eggs and small young. The King and Virginia Rails were frequent, but, strange to say, the usually abundant Sora was not seen. Franklin's Gull and the Black-crowned Night Heron were present in their usual great abundance. The high water had played sad havoc with their nests, which, for the most part, were afloat and in various stages of ruin. The Gulls had small downy young and the Herons had young in all stages of growth, some being almost full-grown. They were having a sad time in the water-logged nests, swishing around high up among the tops of the quill

reeds. Forster's Terns were abundant and had small young. Pied-billed Grebes were less numerous than usual. No Eared, Holboëll's or Western Grebes were seen. The Least Bittern was common, more so than the larger species. Several Wilson's Phalaropes were seen. The guides said there had been a large flight of shore-birds in the spring, but nothing of special interest was seen at this time.

The duck-shooting has been poor at Heron Lake for the past two seasons, especially last fall.

Itasca State Park.—July 3 to August 15. A change of residence on July 3 from Minneapolis to Lake Itasca was a move from the Alleghanian Fauna of the Transition Zone to typical Canadian. Itasca Park is a state reservation, seven miles square, lying a little north of the latitude of Duluth (47°) and not far from the western edge of the Minnesota Canadian. It contains the headwaters of the Mississippi River and is a wild, rough, wooded region, full of lakes, marshes, and spring-runs and is inhabited by more wild creatures than any like area in the state at present. It was established by the state legislature, with the coöperation of Congress, in 1891. It is remote from any railroad, but of recent years has become the summer Mecca of hundreds of automobilists who are in quest of a sight of the wilderness or wish to gaze upon the birthplace of the Father of Waters. There are still standing, rescued from the lumberman, groves of stately Norway and white pines, extensive jack pine woods, clusters of trim spruces and fragrant balsams, thousands of glistening birches and rusty-leaved balm of gilead poplars, with all the associated vegetation of a northern forest. Here many of the birds that pass through the southern part of the state as migrants are found in their home surroundings. The Hermit Thrush is common and an occasional pair of Olive-backs, satisfied with the environment, drop out from the more northward movement of the most of their kind. The curious song of the Blue-headed Vireo rings through the pines. The Olive-sided Flycatcher utters its harsh double note and

dashes after passing insects from the tip-top of some tall dead tamarack or spruce. Twenty species of Warblers, twelve of which are typical Canadian, have been found at home here. The Connecticut is frequent in the cold tamarack and spruce bogs, and the beautiful Blackburnian is one of the commonest among the tall pines. The entire absence of the Yellow Warbler is a singular circumstance, its place being taken by the Chestnut-sided. The Oven-bird, growing scarce in the vicinity of Minneapolis, is here one of the commonest birds and its song is constantly in the ears along all the trails.

Of the characteristic Sparrows, the White-throat and the Junco are the most in evidence. The Red Crossbill and the Pine Siskin are here and the sweet song of the Purple Finch is heard everywhere one goes.

The Scarlet Tanager is common. A male was seen on August 7 in the startling pied dress of a half-molted bird.

Water-birds are not numerous. Loons are common and are to be seen on the lakes early in July, sedulously guarding their pretty black young, which, from the very start, are most expert divers. This year there have been a considerable number of Ducks nesting about the lakes and marshes. In mid-July they were accompanied by broods of tiny young. The most interesting were perhaps the Golden-eyes, the young being especially attractive in plumage and actions. They dive and scatter when close pressed, and the mother duck is very courageous in the face of danger. Wood Ducks are frequent and the broods make a great commotion and flap and swim rapidly to cover when disturbed. A few Mallards and a few Lesser Scaups have also raised broods here this year. Great Blue Herons in abundance, a few American Bitterns, many Black Terns, and an occasional pair of Spotted Sandpipers complete the list of water-birds for the present season.

The Veerys (Willow Thrushes) stopped singing about the middle of July and the Hermits a little later. At this writing about the only bird-song to be heard in the woods is the 'preaching' of the Red-eyed Vireo

and that only now and then. The forest is well-nigh silent and people coming here now remark how few birds there are. But could they have been here six weeks ago, they would have heard a grand chorus of many and varied voices, with the wonderful melody from innumerable Hermits and Veerys as an almost unbroken and thrilling *motif*, running through the whole compelling performance.—THOS. S. ROBERTS, *University of Minnesota, Minneapolis, Minn.*

KANSAS CITY REGION.—Breeding birds in this region, without exception, seem to have had an unusually successful season, notwithstanding a protracted period of drouth. Family parties and flocks of young of all the more common species are seen on every hand in quite noticeably greater numbers than during the last three or four years. It is not recalled that Bell's Vireo, next to the Red-eyed probably our commonest breeding Vireo, has previously been so abundant in the bottom-lands as during the present season. On June 8 three nests containing eggs were found in a short stretch of sparsely timbered Blue River bottom, near the Missouri, and dozens of singing males have been heard in this region since early in May. The upland regions are inhabited by the usual numbers of these gurgling songsters. On the same date and in the same neighborhood, a Spotted Sandpiper's nest was discovered containing four eggs. This bird is common enough in summer along the Missouri River, but this is the first authentic nesting-record for this county.

On June 15 a pair of Blue Grosbeaks were found nesting on the same five-acre tract on which they were discovered last June. This year the nest was built in a low shrub about eighteen inches from the ground, and contained four eggs evidently in an advanced stage of incubation. A prolonged and systematic search has failed to discover another individual of this species in this region. A pair of Lark Sparrows were feeding young in the nest a few feet from the Grosbeak's shrub.

On June 22 two Acadian Flycatcher

nest was found in a wooded creek bottom near Swope Park, and in the same timber the numerous Redstarts were silent where a week ago they were in full song. On this date also a Green Heron and a young Wood Duck were noted on Brush Creek in the Country Club district, nearly two miles within the city limits. The presence of this young Duck is a hopeful sign.

Cerulean and Parula Warblers were still in full song on July 13, and on the 16th the last Orchard Oriole was heard. On July 14 a Baltimore Oriole's nest was found near Independence in a milkweed only two feet from the ground. The nest has not yet been personally examined, but is said to be well constructed of horsehair and string, and typical in every detail.

A flock of twenty Cedar Waxwings was noted on July 22, which is the first local July record for this species. All efforts to locate a breeding pair of these birds have failed. Chipping Sparrows and Maryland Yellow-throats are still, on August 6, in full song, though their second broods are on the wing.

It is very gratifying to be able finally to report the complete rout of the well organized local opponents to the Federal Migratory Bird Treaty Act. The sportsmen of this region, as well as those of Kansas and Arkansas, have long been most determined and earnest in their bitter opposition to this measure, but any doubt remaining in their minds as to the advisability of further defying the law has been laid at rest by the recent decision of Federal Judge Van Valkenburgh declaring it valid. The case was a notable one, and great credit and praise are due United States Attorney Francis M. Wilson for his able handling of the Government's interests. This officer, himself a sportsman of the old school, already has to his credit a victory for the Bob-white of Missouri, gained several years ago in the state legislature. Local observers will now be on the alert to report a noticeable increase in the Geese, since these birds do not appear to have been holding their own with the Ducks during the last three years.—HARRY HARRIS, *Kansas City, Missouri*.

DENVER REGION.—It is a pity that one is not able to recognize more easily individual birds; the present writer is convinced that Bullock's Oriole, the local Oriole of Denver, leaves its Denver breeding area for the south during the first week in August and after this time few, if any, are seen or heard again until about the third week of August, when they reappear and remain for some days. It seems to the writer that this second group of Orioles are arrivals from the North, but without the possibility of individual marks it is difficult to decide this question. This year's observations concerning our Bullock's Orioles confirms the opinion just expressed.

The season now in hand has been one of rather unbroken high temperatures; it always seems to the writer that bird-life is scarce during extremely hot weather. This is most likely only apparent, as parental duties and hot weather may coincide; at any rate the writer's general impression is that the hot weather just past was accompanied by bird scarcity, particularly in regards to Lark Buntings and Lark Sparrows.

This summer's observations have added to the accumulating evidence that Lewis's Woodpecker is extending its range eastward; twenty-five years ago it was rare to see one east of the 'foothills,' while this summer more have been seen than ever before along the wooded creeks east of the mountains, several having been detected as far as twenty-five miles east of them, and more have been noted breeding out on the plains than at any previous time.

In line with this increase of Lewis's Woodpecker, it is highly gratifying to relate that each of the past summers has seen an increasing number of breeding House Wrens in the city of Denver, which may or may not be due to the decidedly noticeable decrease in the number of English Sparrows during the same time in this city. The Lazuli Bunting has visited Denver as usual, and one is singing in the nearby park as this is being written.—W. H. BERGTOLD, *Denver, Colo.*

Book News and Reviews

A REVIEW OF THE ORNITHOLOGY OF MINNESOTA. By THOMAS SADLER ROBERTS, M.D., Professor of Ornithology and Curator of the Zoölogical Museum in the University of Minnesota. Research Publications of the University of Minnesota, VII, No. 2, May, 1919. 12 mo, vi+102 pages, 1 map, 47 half-tones, chiefly from photographs by the author. Price 25 cents.

Dr. Roberts has succeeded in placing between the covers of this booklet a surprising amount of information concerning the bird-life of Minnesota. The life-zones or faunal areas of the state are outlined and mapped, and their characteristics described, a synopsis of the avifauna is followed by an annotated check-list of the birds known to occur in the state, to which is added lists of 'introduced,' 'unsettled,' 'extirpated,' 'vanishing,' and 'hypothetical' species. State and federal game laws are given; there is a chapter on wild-life refuges, one on 'outlawed' birds, and an 'Abridged Bibliography.'

The list is accompanied by an unusually interesting series of photographs, chiefly from nature by the author. The whole makes a practical and attractive little pocket manual, handy as a reference check-list for the student and well designed to hold the attention of those whose inherent interest in birds has lain dormant for lack of the very kind of an awakening this book will give them.

The state of Minnesota is fortunate in possessing an official who, by publications of this kind, is bringing to her citizens a knowledge of their assets in bird-life.—F. M. C.

A SYNOPTICAL LIST OF THE ACCIPITRES (Diurnal Birds of Prey). Part I (Sarcophagidae to Accipiter). By H. KIRKE SWANN, F.Z.S. London: John Wheldon & Co., 38 Great Queens Street. 8vo, 38 pages.

Systematic ornithologists will welcome this useful publication on a group of birds which has not been treated as a whole

since the first volume of the great Catalogue of Birds of the British Museum was issued, that monument to the industry of Bowdler Sharpe and his colleagues.

Diagnostic characters are given for species and races as well as for the higher groups; there is a reference to the original place of description, to which, unfortunately, is not added a statement of the type-locality.—F.M.C.

A PRACTICAL HANDBOOK OF BRITISH BIRDS. Edited by H. F. WITHERBY. Part III, pp. 129-208. June 18, 1919.

The first two parts of this standard work were reviewed in the last number of BIRD-LORE, where we neglected to state that this book is published by Witherby & Co., 326 High Holborn, London, W. C. 1, at 4 s. per part. The present part treats of the Buntings, Larks, Pipits, and Wagtails.—F. M. C.

CASSINIA, A BIRD ANNUAL.—This, the twenty-second annual résumé of the proceedings of the Delaware Valley Ornithological Club, gives, like its predecessors, an attractive picture of the activities of that virile organization. The average attendance at the thirteen meetings of 1918 was twenty-two members and one visitor (in one club we know of it is more apt to be one member and twenty-two visitors!), figures which, in connection with the program given for each meeting, indicate sustained interest in the club's proceedings.

Several of the papers presented are published in this annual, among them one on 'The Birthplace of John Cassin,' by F. H. Shelton, abstracts from the journals of Andreas Hesselius for the years 1711-1724; and a 'Report on the Spring Migration of 1918' compiled by Witmer Stone.

It is a great pity that D. V. O. C's with their 'Annuals' cannot be established throughout the land. Why should Philadelphia have a 'corner' on organizations of this character?—F. M. C.

The Ornithological Magazines

EL HORNERO.—The third number of *El Hornero* (The Oven-bird), organ of the Sociedad Ornitológica del Plata, which, we believe, is the only ornithological society in Latin America, maintains the high standard set by the two preceding issues. Dr. Dabbene continues his helpful studies of the Gulls and Terns of Argentina with an illustrated paper on the latter group containing a detailed 'Key,' some synonymy and distributional data; he also presents the second part of his paper on a collection of birds from the island of Martin Garcia, and, under 'Notes,' describes as new *Penelope nigrifrons* and *Spinus ictericus magnirostris* from northwestern Argentina, both descriptions, it may be added, with their accompanying comments and data being most satisfactory expositions of the matter in hand.

Aníbal Cardoso makes a further contribution to what might be called antiquarian ornithology in the second part of his 'Ornithology of the Conquistadores;' Renato Sanzin gives a list of the birds contained in his collection from the province of Mendoza, and Pedro Serié gives full instructions, illustrated with excellent cuts, on how to make birds' skins. May we suggest that the label shown attached to the specimen on page 175 is unnecessarily large. A label two and a half inches long by half an inch wide proves in practice to be large enough for the largest bird. Carlos Spegazzini describes an exceedingly interesting case of melanism in small Doves (*Columbina picui*) which, in captivity, acquired a blackish plumage, but when released regained their normal coloration at the first molt after they had been given their liberty. When these birds were recaged they again became melanistic.

Other biographical notes of more than usual interest relate to a common Argentine Duck (*Metopiana peposaca*) and the short-eared Owl (*Asio flammeus*). The former is believed by Demetrio Rodríguez not to have a nest of its own, but, like our Cowbird, to be parasitic upon

other aquatic species; the latter is shown by Antonio Pozzi to capture tucu-tucus (*Ctenomys*), a small rodent resembling our gophers (*Geomys*) in appearance and habits, by sitting at the openings to the subterranean runways with extended claws in the attitude depicted in the accompanying drawing, which we reproduce from *El Hornero*.



THE SHORT-EARED OWL AS A GOPHER TRAP.—From *El Hornero*

Under the head of 'Notes on the Birds of Paraguay,' the well-known Paraguayan ornithologist, A. de W. Bertoní writes of the insect-eating habits of Herons, including the White Egret (*Herodias egretta*), of the effects of a cold wave on the bird-life of the upper Paraná, and upon the little-known nesting habits of certain Paraguayan birds.

A record of special interest to North American ornithologists is contained in a paper on the birds of northwestern Argentina by Luis Dinelli, who states that Bobolinks in great flocks arrive at Tucumán at the beginning of summer [November]. True to the unfortunate habit which has recently caused our Biological Survey to declare an open season on these birds, Señor Dinelli says that they visit the rice-fields where, feeding at this season only on rice, they cause appreciable damage. The Bobolink's song, Señor Dinelli writes, is not lacking in melody, but since the birds all sing together, it is not possible to determine its individual character.

In a presidential address delivered before a meeting of the society held in the National Museum at Buenos Aires, September 5, 1918, Dr. Dabbene presented a most encouraging review (p. 198) of its

history during the three years following its organization. At that time the membership of all classes was 152 (raised to 175 in December) and it is evident that already the Sociedad Ornitológica del Plata has exerted a marked and most beneficial influence on the promotion of bird-study in the La Plata region. It must be quite clear to anyone reading this abstract of the contents of the latest issue of its official organ that it is not lacking in either observers or observations of the first order.—F. M. C.

THE AUK.—The July issue contains several contributions to interesting phases of the life-histories of North American birds. In 'Some Notes on the Drumming of the Ruffed Grouse,' H. E. Tuttle presents detailed close-range studies of wild Ruffed Grouse drumming, illustrated with an excellent full-page photograph of a bird in action, and accompanied by discussion of possible interpretations of his data and that of others on this interesting subject. 'The Singing Tree, etc.,' by H. Mousley, correlates favorite singing stations of male birds, or points where they remain on guard, with the location of the nest. A tabular list is presented, worked out for forty-two nests representing twenty-five species, of which twelve are Warblers and the remainder scattered among unrelated groups, including the Spotted Sandpiper and perching birds from Flycatcher to Bluebird. The average distance from the male's station for all nests listed is 17 yards, but there is evidently variation by species, four nests of the Maryland Yellow-throat varying from 4 to 11 yards; two of the Black-throated Blue Warbler from 50 to 100 yards; four of Flycatchers from 5 to 8 yards, and three of the Prairie Horned Lark from 21 to 34 yards. In deliberately finding the nest of a Bay-breasted Warbler, by a study of the male bird's singing stations and of the surrounding territory, nests of a Magnolia and Black-throated Green Warbler and of an Olive-backed Thrush were located more or less incidentally—luck and 'genius' still seem important factors in locating bird-nests.

'The Early History of a Duck Hawk,' by Viola F. Richards, contains observations at the nesting-station for this species on Sugar Loaf Mountain, Deerfield, Mass., illustrated by excellent photographs; 'Black Duck Nesting in Boston Public Garden,' by Horace W. Wright, is an account of more or less successful nesting in successive years of a pair of wild Black Ducks at a pond in a city park; and a paper by C. A. Robbins deals with 'A Colony of Cape Cod Piping Plover.' After a period of scarcity there is a marked increase in the numbers of Piping Plover on Cape Cod, probably from better protection. Incidentally we hear of a similar increase further south along the coast.

Two local lists are from the southern states, namely 'Some Summer Birds of Liberty County, Georgia,' by W. J. Erichsen, listing perhaps half the breeding species with interesting nesting data; and 'A Three Months' List of the Birds of Pinellas County, Florida,' by Clifford H. Pangburn. 'Three Interesting Great Horned Owls from New England,' by Glover M. Allen, calls attention to the occasional occurrence there in winter flights of the Horned Owl, of individuals representing the Labrador-Newfoundland, as also the north-interior, races of this bird. Concentration of wandering Owls from widely separated breeding areas upon a single hunting territory, as here evidenced for New England, is of more than passing interest.

'Audubon's Bibliography,' by Francis H. Herrick, will be of reference value for those interested in the various editions of Audubon's works. Papers by Oberholser and one by Loomis on the Galapagos Albatross, in which the illustrations are of exceptional excellence deal with technical description and nomenclature, and matters of nomenclature occupy much of the General Notes, where, besides the usual records of various species in localities where their occurrence is noteworthy McAtee presents some interesting results of recent study of the Bobolink, showing that it is shifting its breeding-range north-westward, while maintaining a southward

migration route along the Atlantic coast, where it is still so destructive to the rice-crop as not to merit the protection, as a species, accorded other song-birds. Townsend calls attention to evidence of wanton destruction of sea-birds in Labrador contained in a letter from Dr. Robert T. Morris.

In the news items there is mention of the Mammal Society of national scope organized at Washington, D. C., in April, of which Dr. C. Hart Merriam is president; and we learn that the 1919 meeting of the American Ornithologists' Union is scheduled to be held in the American Museum of Natural History, New York City, November 11 to 13.—J. T. N.

THE CONDOR.—The March and May numbers of *The Condor* contain more than the usual number of interesting articles and notes. Bradbury's well-illustrated 'Nesting Notes on the Rocky Mountain Creeper' based on observations made in Gilpin County, Colo., in June, 1917; Munro's 'Notes on the Breeding Habits of the Red Crossbill in the Okanagan Valley, B. C.,' in 1918; and Willett's 'Notes on the Nesting of Two Little-known Species of Petrel'—the White-breasted Petrel (*Pterodroma hypoleuca*) and the Sooty Petrel (*Oceanodroma tristrami*) on Laysan Island in 1913—treat of little-known phases in the life-history of these interesting birds. On the other hand, A. M. Ingersoll's autobiography, and Mrs. Bailey's sympathetic sketch of the late Mrs. Olive Thorne Miller introduce the reader more intimately to the lives of two prominent California ornithologists. Warren's 'Bird Notes of a Stormy Day in May [1917] at Colorado Springs,' Wetmore's 'Bird Records from the Sacramento Valley, Calif.,' in 1918; Mailiard's 'Notes from the Feather River Country,' Calif., in the spring of the same year; and Taverner's 'Summer Birds of Hazelton, B. C.,' contains much of local

interest, while Edward's 'Losses Suffered by Breeding Birds in Southern California,' and L. H. Miller's discussion of 'The Marital Tie in Birds' should be read by all who are interested in the general aspects of ornithology. Indeed, the last two articles furnish not only much food for thought, but suggest the importance of further observation and discussion of these questions.

The May number opens with Bradbury's 'Notes on the Egg of *Aepyornis maximus*' of Madagascar, accompanied by some striking illustrations of a specimen in the Bradbury collection in the Colorado Museum of Natural History. This egg, measuring $9\frac{1}{8}$ by 13 inches, was one of the first of this species to reach America and was imported by the late Robert Gilfort, of Orange, N. J. Its displacement is equivalent to that of $7\frac{1}{2}$ ostrich eggs, 40 goose eggs, or 183 hen eggs. Mrs. Bailey contributes a sixth chapter to her 'Return to the Dakota Lake Region,' treating of 'The Coulee of the Meadows.' Oberholser, in a 'Description of an Interesting New Junco from Lower California' separates the bird from the Hanson Laguna Mountains under the name *Junco oregonus pontilis* 'although its range seems, like that of *J. o. townsendi*, to be restricted to a single mountain range.' The biographical contributions in this number include the first part of the autobiography of Henry W. Henshaw, a sketch of the late Malcolm P. Anderson by his father, and a brief obituary notice of Merrill W. Blain by the editor. The Henshaw autobiography is one of the most interesting as well as important of those which have thus far appeared in the *Condor* series. The number closes with the annual directory, containing the names and addresses of 6 honorary and 585 active members of the Cooper Ornithological Club, a slight decrease in comparison with the total of 600 names on the rolls last year.—T. S. P.

Bird-Lore

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Devoted to the Study and Protection of Birds
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Edited by FRANK M. CHAPMAN
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Bird-Lore's Motto:

A Bird in the Bush Is Worth Two in the Hand

It gives us much pleasure to announce that Dr. Arthur A. Allen, professor of Ornithology at Cornell University, has joined BIRD-LORE's staff, as editor of the School Department, in succession to Mrs. Walter, whose retirement has been forced by ill-health. Dr. Allen has developed a definite program for the coming year, which he will announce in the next issue of BIRD-LORE.

THE Annual Congress of the American Ornithologists' Union will be held at the American Museum of Natural History, New York City, November 11 to 13. Everyone who has had the pleasure of attending an A. O. U. meeting looks forward with keen anticipation to being present at the next one. There is the certainty of an interesting program, of hospitalities from the local members, and of many opportunities for social intercourse.

Every bird-student knows that there is an excitement connected with his pursuit in the field which is attached to no other natural history study. Allied to the peculiar attractions of the chase is the added enjoyment of trained appreciation, which enables one to value his good fortune at its real worth.

'A privilege,' as Bulwer Lytton somewhat tritely remarked, 'is "valuable" in proportion to the exclusiveness of its possession,' and what privilege can be more exclusive than to be at the right spot and the right time to meet the rare migrant or

accidental visitant which no one may ever have seen before in your neighborhood?

These memorable experiences are relived as we recount them to the attentive and sympathetic ears of our fellow-students. To paraphrase Thoreau, one might say, 'Who are the excited? Two birdmen talking!'

Everyone has an opportunity to talk at an A. O. U. meeting, if not during the sessions, at least at the daily luncheons, at the annual dinner, and at the informal gathering which forms so pleasant a feature of one of the evenings. It is true that all these blessings are the privileges of members of the Union, but it is also true that it is the privilege of every bird-student to become a candidate for membership in the Union. A card addressed to Dr. T. S. Palmer, secretary of the Union, at The Biltmore, Washington, D. C., will bring all needful information.

THERE was at one time a project on foot to establish a great national university at the nation's capital, and some of the buildings for it were actually completed. But in *Science* for May 2, 1919, Mr. E. W. Nelson shows that the various scientific bureaus of the Government having their headquarters at Washington form, in fact, a great national university with opportunities for study the value of which is not realized by the general public or even by that part of it which should be interested in the opportunities which Washington offers. We commend his article to everyone considering a scientific career. It contains many practical suggestions.

ALL lovers of the Bobolink will regret that its rice-destroying habits as a Reedbird have induced the Biological Survey to remove it from the list of protected birds during its southward migrations through the Gulf and Atlantic states, from New Jersey southward. In this connection we call attention to the record of the occurrence of this species in numbers in northwestern Argentina in our review of *El Hornero*.





TURKEY VULTURE

Order—RAPTORES

Family—CATHARTIDÆ

Genus—CATHARTES

Species—*AURA SEPTENTRIONALIS*

National Association of Audubon Societies

TURKEY VULTURE

By T. GILBERT PEARSON

The National Association of Audubon Societies

EDUCATIONAL LEAFLET NO. 100

While traveling through almost any section of the southern and western states, one has but to look up to discover, off against the sunlit sky, the dark form of a Turkey Vulture keeping its vigil over the earth beneath. No land-bird of this country is comparable to it in matters of grace and majesty of movement while in the air. As it soars, with scarcely a wing-beat, now low over the gardens or woods, and again far aloft in the eternal blue, the watcher may well exclaim, "Behold flight in its utmost perfection!"

Turkey Buzzards, as these birds are almost universally called, are not so abundant as some observers have been led to believe. They are such large and striking creatures, and keep so much in view, that the error of thinking they exist by thousands in any given community is perhaps a natural one. And yet, for so large a bird, we may consider them relatively numerous.

They are most useful birds as scavengers. They quickly find and consume with equal avidity the dead snake by the roadside, the trapped rat thrown out



TURKEY VULTURE, FOUR WEEKS OLD

Photographed by Thomas H. Jackson

from the barn, or the deceased hog in the pasture. They eat dead fish left on the sea-beaches, and I once saw one feeding on the floating body of an alligator. In many of the southern states, where no laws exist requiring cattle owners to fence in their stock, cows are constantly killed by railroad locomotives, and, as one passes such spots on the train, it is a common sight to see Turkey Buzzards and Black Vultures rise from their feast and flap up to the limbs of the neighboring trees. When the planter loses a horse by death, the body is dragged off into the woods and left. Two or three days later only bones and trampled grass mark the last resting-place of the departed beast of burden.

In many a southern city the Vultures constitute a most effective street-cleaning department, and the garbage piles on the city's dump-heaps are swept and purified by them. When the rancher of the West dresses cattle for home consumption or the market, his dusky friends in feathers gladly save him the trouble of burying the offal.

These Vultures at times anticipate the death of an animal and gather about it while waiting the appointed hour. While working in a most forbidding morass, deep in a Florida swamp, the writer on one occasion came upon a striking example of this custom. Progress was slow, and it was impossible to advance except with the greatest care and by springing from clump to clump of palmetto roots. Between these supports the mud seemed to be fathomless. Here, in these forbidding surroundings, I came upon a cow sunk into the mud to a line half-way up her body. Her condition was absolutely hopeless, and she had become so exhausted that she was scarcely able to move her head.

On trees and bushes on all sides and above her, Turkey Buzzards and Black Vultures were perched to the number of fifteen or twenty. Two of them were standing on palmetto clumps but a few feet from her head. There was no possible way of saving the doomed animal—the Vultures were sure of their banquet.

I recall a certain slaughter-pen in a little rural community where twice a week a beef was butchered, and the meat immediately sold to the people of the surrounding country. The killing took place every Wednesday and Saturday afternoon. A group of Vultures were always present, sitting around in the trees and waiting for the butchers to depart with the hide and flesh. The refuse was always left for them.

Turkey Buzzards are fond of gathering about pens where hogs are fed, for a certain amount of scraps of food fall to their share. The birds may be seen perched here all hours of the day, sometimes with wings expanded as if for the purpose of allowing the sun's rays to purify their feathers. They feed almost entirely on the ground, although occasionally they will carry some choice morsel to a less public spot to eat it. Their feet are not well adapted to holding their food and eating it while standing on a limb of a tree or other narrow perch, but at times they do eat on the top of a stump or the roof of some building.

One day, a lady of my acquaintance, while sitting alone in her room, was much startled when a beef-bone fell down the chimney and rolled out on the hearth. Going outside, she discovered a Turkey Buzzard peering down the chimney in quest of his prize. These perches, by the way, are often occupied by Buzzards, who expand their wings and stand in the smoke, undoubtedly enjoying the heat that comes from below. On two occasions I have seen these birds take such positions when their feathers were almost entirely frozen together by sleet that had recently fallen. To a limited extent, our southern Vultures feed on living animals. Newly-born pigs are killed by them, and, in some of the bird-colonies guarded by the National Association of Audubon Societies, young Herons and Ibises are often eaten.

There has been much discussion throughout the years as to whether the Turkey Vulture finds its food by sight or by the sense of smell. Various experiments have been undertaken, with a view of determining this fact. It is, today, a generally accepted theory that the eye of the Vulture alone leads it to its prey.

Although Turkey Vultures hunt singly, a flock of them quickly collects when food in quantity becomes available. Over the coveted carcass they flop and hiss and even fight in a bloodless sort of way. Aside from this hissing and an occasional low grunt, the birds appear to be voiceless. Although in no sense gregarious by day, except when the common interest of food discovered brings them together, Turkey Buzzards dearly love to come together at night, and there are many 'Buzzard roosts' throughout the length and breadth of the land. For long years the favorite spots are thus occupied by all the Buzzards in the section. Sometimes these roosts consist merely of a small group of dead trees in the woods or an unfrequented field, but more often they are deep in some swamp, where intrusion by human disturbers is not probable.

Along the coasts of South Carolina and Georgia there are extensive salt marshes. Through these are scattered little islands densely covered with growths of deciduous trees, yuccas, and vines. Some of these are famous Buzzard roosts, and old men of the country will tell you that the birds have been coming there every night since they were boys.

The nesting-place of the Turkey Buzzard is usually a hollow log lying in the woods or swamp. As a rule, no attempt at nest-building is made, the eggs being deposited on the rotten wood or the leaves that may have blown in through the opening. Hollow stumps are frequently chosen as the proper home for the young. I have found the eggs of these birds on a level with the ground in the hollow snag of an old tree, the entrance to which was at the top, 14 feet above. Rarely, nests have been reported in deserted cabins in the woods or in old hog-pens.

In the little limestone caves, or dry 'sink-holes' of central Florida many Buzzards' nests may be found.

When one approaches the nest of a Turkey Vulture in the woods, the bird

usually flies away, but seldom is there a chance for one to escape from a sink-hole, as the intruder is usually at the entrance before learning of his presence. I have gone down in a number of these caves and have found the old birds sitting on their nests. On such occasions the bird made no effort to escape, nor showed any disposition to peck the offending hand that reached in under her and withdrew the eggs. A few hisses of remonstrance, usually accompanied by a peace-offering consisting of a portion of her last meal, which she humbly laid at my feet, were the only evidences of distress any of them ever exhibited.

The eggs are two in number and are about $2\frac{3}{4}$ inches in length by 2 inches in width. They are dull white or pale yellowish or pinkish, spotted and blotched with markings of various shades of chocolate.

The naked young are soon covered with a coat of white down, hence the old, homely expression, 'Every old Buzzard thinks her young one is the whitest.' From eight to ten weeks are passed in and about the nest before the young are able to fly.

An adult Turkey Buzzard is about $2\frac{1}{2}$ feet from bill-tip to tail-tip, and the expanse of wings measures about 6 feet. The bird weighs in the neighborhood of six and a half pounds. In color its plumage is blackish brown. The head of the fully adult is devoid of feathers, with a reddish or crimson skin. Its eyes are brown and the bill dead white.

A great scourge throughout the United States is hog cholera, which annually results in enormous losses. Certain state veterinaries and others have come forward with the claim that Buzzards distribute hog cholera and therefore the birds should be killed. The claim is that the Buzzards feed on hogs that have died with cholera, get the germs on their bills, feet, and feathers, and, flying away, distribute the disease to other droves of swine. This is probably correct. However, the Buzzard is not the only distributor of cholera germs. These are carried about the place and from farm to farm on men's shoes, hoofs of horses, and wagon-wheels, as well as dogs, horses, foxes, opossums, and other animals, that, particularly during the hours of darkness, visit carcasses and then pass on. Flies undoubtedly carry far more of the anthrax germ than does our much-abused Vulture.

Of course it has been pointed out that if the stock-raiser will burn or bury the body of his hog as soon as it dies and not leave it in the open, neither the Vulture nor any other animal will carry the germ, but this involves additional labor on the farm, which, of course, must be avoided where possible.

The Turkey Vulture ranges from northern Mexico to British Columbia and Saskatchewan in the West, and in the East is found as far north as southern New York state. It is usually a resident where found, although in the West the bird retires to California, Nebraska, and the Ohio Valley at the approach of winter.

The Audubon Societies

EXECUTIVE DEPARTMENT

Edited by T. GILBERT PEARSON, *Secretary*

Address all correspondence, and send all remittances for dues and contributions, to the National Association of Audubon Societies, 1974 Broadway, New York City.

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Any person, club, school or company in sympathy with the objects of this Association may become a member of it, and all are welcome.

Classes of Membership in the National Association of Audubon Societies for the Protection of Wild Birds and Animals:

\$5 annually pays for a Sustaining Membership

\$100 paid at one time constitutes a Life Membership

\$1,000 constitutes a person a Patron

\$5,000 constitutes a person a Founder

\$25,000 constitutes a person a Benefactor

FORM OF BEQUEST:—I do hereby give and bequeath to the National Association of Audubon Societies for the Protection of Wild Birds and Animals (Incorporated), of the City of New York.

ANNUAL MEETING

The fifteenth annual meeting of the National Association of Audubon Societies will be held in the American Museum of Natural History, New York City, on Tuesday, October 28, 1919. The business session will take place at 10 o'clock A.M. After luncheon it is planned to have an Educational Conference beginning at 2 o'clock.

The general public meeting will be held in the large lecture hall of the Museum at 8 P.M., Monday, October 27. An interesting program of popular character will be presented. All members of the Association, as well as others interested in the study and protection of wild life, are invited to attend any, or all, of the sessions.

LIFE MEMBERS AND THE ENDOWMENT

One may become a Life Member of the National Association of Audubon Societies by the payment of \$100 for this purpose. Such membership entitles the holder to a continuous free subscription to BIRD-LORE, and the receipt of various publications of the Association as they appear. Life membership fees, without exception, are always placed in the permanent Endowment Fund of the Association, and as we receive not less than 5 per cent income from our investments, this means that by becoming a Life Member one endows a sustaining \$5 membership.

Up to the present time there have been enrolled 698 Life Members, which means

that the Endowment Fund has been increased from this source by \$69,800.

To any thoughtful person the need of a substantial endowment for an educational institution of this character is of the highest necessity and importance. For this reason the Board of Directors does not hesitate to urge the members and friends of the Audubon movement to take out life memberships and thus aid in placing the work on a firmer foundation.

The fee for a Patron is \$1,000 paid at one time for this purpose. These fees, likewise, are placed in the Endowment Fund. To the present time four Patrons have been enrolled: Miss Heloise Meyer, Mr. William P. Wharton, General Cole-

man du Pont, and a friend who has requested that her name be not published. We believe there are hundreds of Sustaining Members and subscribers of the Association who could readily become Life Members or Patrons and who would gladly do so if the full needs of the Association could at the proper time be brought strongly to their attention.

All bequests, unless otherwise requested, are placed in the Endowment Fund, and only the interest used for current expenses. We have received many letters from well-wishers who have expressed their interest in becoming Life Members or Patrons, but stating that they did not feel at the time that they could spare the necessary fee. To such we would respectfully suggest that they make provision in their wills for an amount equal to such funds, in order that bird-protection in days to come may receive support to a degree which they felt unable to extend during their lifetimes.

The entire Endowment Fund of the National Association of Audubon Societies today amounts to \$429,762.59. This yields an income of something over \$20,000 annually. When we consider that the annual expenses of the Association are at least \$100,000 in excess of this amount, and that we are continually handicapped from lack of funds to assist local organizations, volunteer workers, employ wardens and to carry on needed educational and legislative campaigns, one will realize how really comparatively small is the Association's endowment. Much of the time of

the Executive Officer and the office force must necessarily be expended in raising funds, which, with a larger endowment, might be applied more directly to the problems of wild-life protection.

From July 1, 1919, to September 1, 1919, the following Life Members were enrolled:

Abbe, Dr. Robert
 Blossom, D. S.
 Boyer, Joseph
 Castleman, Mrs. Geo. A.
 Denegre, William P.
 Ellsworth, Mrs. Henry M.
 Ernst, Richard P.
 Ewing, J. Hunter
 Fay, S. Prescott
 Ferry, Mrs. Abby Farwell
 Ford, Henry
 Franklin, H. H.
 Freer, A. E.
 Gregory, Mrs. Clifford D.
 Hallett, Mrs. Emma F.
 Harkness, Mrs. Edward S.
 Kirby, Fred M.
 Lindsay, Miss Jean
 McKinlock, George A.
 Mallinckrodt, Edward
 Mather, Katherine L.
 Moore, Mrs. Alfred F.
 Moore, Henry D.
 Morse, Mrs. Joy C.
 Neely, James C.
 Palmer, Charles H.
 Plant, Fred'k S.
 Rockefeller, Mrs. Frank
 Russell, Mrs. Emily L.
 Russell, Mrs. Robert Shaw
 Sears, Mrs. Richard W.
 Seiberling, F. A.
 Sprague, Miss Laura
 Tolman, E. E.
 Tracy, Mrs. Jane A.
 Wood, William M.

FEATHER SMUGGLING

One of the provisions of the United States Tariff Act, enacted in 1913, makes it illegal to bring into the United States, except for scientific and educational purposes, the plumage of any wild bird. This act was secured, of course, as a further restraint on the millinery trade in the matter of using the plumage of wild birds. Nevertheless, plumage continued to be seen on the streets of New York and else-

where, and much of it appeared to be new millinery. Evidently, the smuggling of Heron aigrettes, Bird-of-Paradise plumes, and plumage of the Goura Pigeon flourished despite the law.

Now and then a small consignment would be seized and the smugglers prosecuted, but it was the theory of the customs officials that in some way these contraband feathers were arriving in large

numbers, and every possible agency was employed to discover how this was being done. More than three years elapsed, however, before success crowned the efforts of our diligent officials.

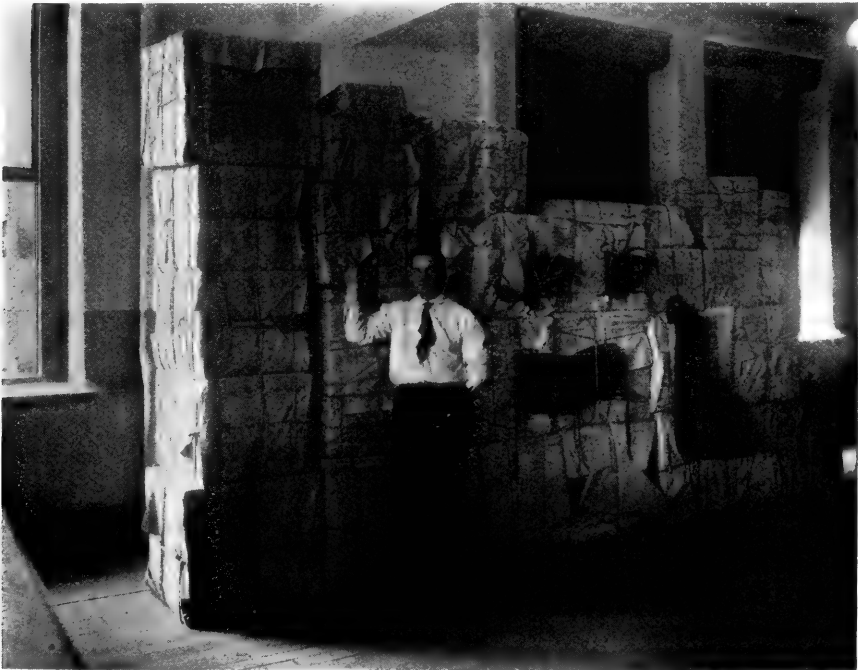
When discovered, the case proved to be such a large and important one, that it is believed the readers of BIRD-LORE will be interested in learning something about it. The statement of facts furnished by U. S. District Attorney Harold Harper, and U. S. Customs Roundsman J. C. Rothschild, and authorized by the Customs Office, is as follows:

On November 26, 1916, the U. S. Kroonland arrived at Pier 59, North River, New York City. Immediately after the ship docked, at 2 P.M., Angelo Tartaglino, Chief Steward of the ship, came up to the gate and J. C. Rothschild, U. S. Customs Roundsman, questioned him, asking if he had any contraband. He said, "No." Rothschild asked him to open his

coat. He put his hand down in the man's trousers and found a wide cloth life-belt which he said he was wearing because he was sick. Rothschild took him into the Customs House on the pier, searched him, and found that the "life-belt" contained 150 Bird-of-Paradise plumes. Thereupon Tartaglino confessed that he had seven more belts aboard ship. These were seized and found to contain 950 Paradise plumes and 849 Goura plumes.

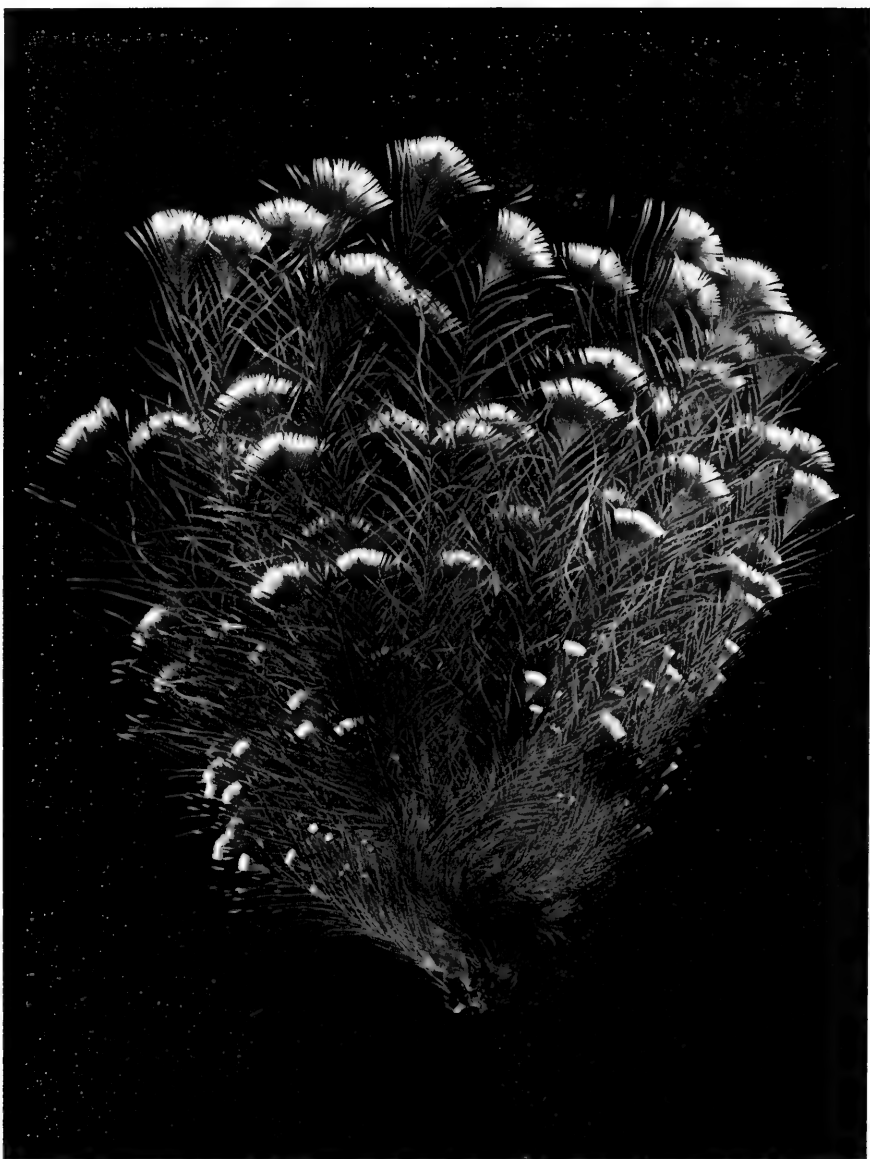
On December 15, 1916 Tartaglino pleaded guilty to smuggling plumage and was sent to Trenton prison for eleven months and fifteen days, and paid a fine of \$500.

While the case against Tartaglino was pending, he was admitted to bail, this being furnished by the chef at Shanley's Cafe. Thinking that perhaps Tartaglino was really an agent for some New York house, and that this chef must be a go-between, the chef was watched, with the



\$150,000 WORTH OF SMUGGLED WILD-BIRD PLUMAGE

In the Seizure-room of the New York Customs Office, August 1, 1919. Photographed for the National Association of Audubon Societies



SCALP AND PLUME FROM THE GOURA PIGEON

Photograph of one of the 150 Gaura plumes presented by the U. S. Treasury Department to the National Association of Audubon Societies



J. S. ROTHSCHILD, CUSTOMS HOUSE ROUNDSMAN OF THE PORT OF NEW YORK
Shown holding Bird-of-Paradise plumes, and wearing one of the sack-like belts which he discovered to
be the means by which a wealth of bird-feathers was being smuggled into the United States.
Photographed for the National Association of Audubon Societies

result that it was discovered that after Tartaglino went to prison, he received checks regularly from this chef.

Mr. Harper brought the chef and Tartaglino before the Grand Jury, and after a grilling examination, Tartaglino broke down and confessed that he was an agent for Arthur Arbib, of the New York Fashion Feather Company, and that this was his second trip. He stated that a man who had been smuggling for Arbib for some time, viz., one Felice Strado, had left the employ of the Steamship Company and had gone to his home in Italy, and that he, Tartaglino, had bought his business. On his first trip he had received about \$300, \$200 of which he had to pay to Strado for his smuggling rights with Arbib.

Arbib then came forward and confessed. His store was raided and his goods, Paradise and Goura feathers to the value of \$73,500, were seized on the theory that his stock was that which had been brought over by Tartaglino on his first trip. Tartaglino, however, advised that on his first trip he had examined only the contents of one of his life-belts, and that it contained wholly Paradise plumes. He was unable to swear whether he had brought any Goura plumes. The court, therefore, ordered the customs authorities to return to Arbib the Goura plumes. These were so numerous that it required seventeen cartons, 3 by 3 by 4 feet to contain them.

Arbib was fined \$4,500 on conspiracy and \$500 on smuggling, but, on account of poor health, escaped a prison sentence. Investigation proved that the supplies of Goura and Paradise of many of the large department and women's furnishing stores in New York City came from Arbib. These, to the value of perhaps \$100,000, or more, were seized, but through lack of evidence to establish the fact that they had been smuggled, many of them were ordered returned by the courts.

Today, if you go down in the shopping district of New York, you may see many of these Goura and Paradise plumes exhibited for sale in shop windows.

On July 16, 1919, by order of the Assis-

tant Secretary of the Treasury, 150 of the Goura plumes in the Seizure-room, valued by the appraiser at \$8 each, were delivered to the National Association of Audubon Societies for educational and scientific purposes, and 150 Paradise plumes, valued at \$35 each, were likewise presented to the Association.

At the time the writer visited the Seizure-room and received these feathers, it was learned that an assistant treasurer had conceded to the suggestion made by the customs officials, and authorized the sale at public auction of this confiscated stock, which, it was estimated, would probably bring about \$150,000. It was argued that there was no law in the United States against the sale of these particular feathers, although the law prohibited their importation, and as they were already here there was no reason why they should not be sold and the Government derive a financial benefit therefrom. The Directors of the National Association of Audubon Societies strongly disapproved of this proposed procedure, and the Secretary was authorized to make vigorous protest, and seek to prevent the carrying out of this plan, so wholly in opposition to the spirit of bird-protection. The Secretary promptly notified the Biological Survey and the United States National Museum regarding this stock of feathers. These two branches of the Government work applied to the Treasury Department for the confiscated goods to be used for educational and exhibition purposes.

A Committee from the United States Millinery Chamber of Commerce and George Lawyer representing the Biological Survey appeared before the Treasury Department and urged that these feathers should not again be placed in the trade, but should be delivered to the Biological Survey for educational purposes.

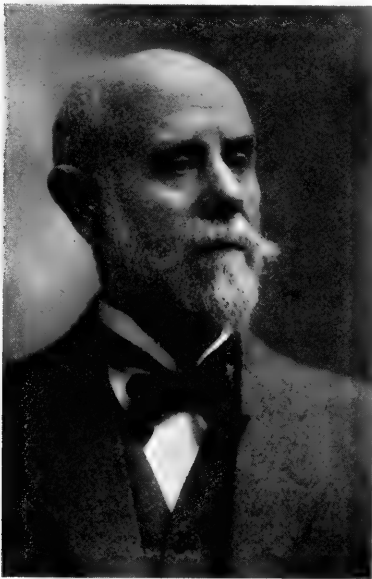
It is a pleasure to announce that so effective was their plea that the customs authorities have been ordered to turn over the plumage to the United States Biological Survey.

From the above account many interesting details in connection with this case

have necessarily been omitted, but enough has been given to show that while other smuggling of feathers is doubtless still going on, one of the largest offenders has been apprehended and his smuggling business destroyed.

Death of Dr. Joseph Kalbfus

Dr. Joseph Kalbfus, Executive Secretary of the Board of Game Commissioners of Pennsylvania since its creation in 1895, was killed by an express train near Tiona Warren County, Pa., on August 10, 1919.



DR. JOSEPH KALBFUS

At the time, he was in an automobile with E. W. Kelly, Field Superintendent of the Commission, who likewise was killed.

Dr. Kalbfus was the dean of State Game Commissioners in the United States, having held his position with distinction for twenty-four years. One of the characteristics for which he was noted was his astonishing fearlessness, which he often exhibited in personally arresting desperate characters whom others hesitated to approach.

He was greatly devoted to his work and

wild-life protection has lost one of its strongest, most effective, and most picturesque leaders.

A Worth-While Report

The West Chester (Pa.) Bird Club issued, in July, a twenty-page pamphlet with cover, in which is given a historical sketch of the Club. The author knows how to present such a subject most entertainingly. Glossed book paper is used, which permits splendid reproduction of eight interesting photographs, including pictures of Dr. C. E. Ehinger, Henry J. Fry, Dr. S. C. Schmucker, and other members of the Club. A group of 180 school children, with bird-boxes, is also shown, and a comical group of young Screech Owls, and nests of the Phoebe, Kentucky Warbler and Chestnut-sided Warbler.

The pamphlet gives the names of 40 resident members and 6 non-resident members, as well as a list of 162 birds that have been observed and identified locally by the West Chester Bird Club since its organization.

Iowa Wild-Life Conference

Under the auspices of the Iowa Conservation Association, a wild-life protection and propagation congress was held at McGregor, Iowa, the past summer. It enjoyed the hearty support and patronage of the McGregor Heights Outing Association. The conference lasted for five days, and, in a large tent, frames of pictures issued by the National Association of Audubon Societies, and other material were exhibited. It is planned to hold a similar conference next year, and it is to be hoped that the response will be sufficient to encourage our Iowa friends in making this summer gathering of outdoor lovers an annual occasion.

The Directors are: Fred G. Bell, F. S. Richards, T. A. Jayne, T. J. Sullivan, and L. P. Bickel of the Outing Association; also Dr. Geo. F. Kay of the Iowa State University, geologist; Dr. L. H. Pammel, Iowa State College, botanist; Prof. Bo-

humil Shimek, Iowa State University, dendrologist; Dr. T. C. Stephens, Morningside College, ornithologist, and Prof. Charles R. Keyes, Cornell College, Department of Indian Lore.

As those responsible for next year's program are anxious to make it as complete as possible, they will be glad to receive suggestions from educational institutions, nature-study clubs, and kindred organizations throughout the country, interested and sympathetic in this new enterprise. Communications relative thereto will receive every attention during the ensuing twelve months. Fred G. Bell, McGregor, Iowa, is president of the Association; George F. Kay, Iowa City, Iowa, Dean of the faculty; and George Bennett, Iowa City, Iowa, Registrar of the School.

Mr. George Bennett, of Iowa City, field representative of the Iowa Conservation Association, writes most enthusiastically of the outlook for this laudable undertaking.

Cat Ordinance for Oak Park, Ill.

Adopted in June, 1919

Whereas, Stray and unrestrained cats wandering about the Village of Oak Park have become a menace to the public health and a source of damage to gardens, and have been and are destroying large numbers of birds living and nesting within the limits of the village, and such cats should be restrained or destroyed in order to promote the health, comfort and welfare of the inhabitants of the village;

Therefore, Be it ordained by the President and Board of Trustees of the Village of Oak Park:

Section 1. STRAY CAT. The term "stray cat," as used in this ordinance, shall be held and construed to mean any cat within the limits of the Village of Oak Park and not on the premises of the owner or keeper thereof.

Section 2. UNRESTRAINED CAT. The term "unrestrained cat" as used in this ordinance shall be held and construed to mean any cat not controlled or kept in proper confinement by the owner or keeper thereof as hereinafter provided.

Section 3. WHEN A NUISANCE. The permitting or keeping of any stray or unrestrained cats within the limits of the Village of Oak Park, contrary to the terms of this ordinance, is hereby declared to be a nuisance and any and all such cats shall be restrained or destroyed as provided by this ordinance, and the owners and keepers thereof shall be subject to the fines hereby imposed for any violation of this ordinance.

Section 4. CONTROL AND RESTRAINT OF CATS. No person shall cause or permit any cat or cats owned or kept by him or her to run at large on any street, alley, or other public place, or upon the premises of any other person, within the Village of Oak Park between the hours of 7 P.M. and 9 A.M. of each and every day during the breeding season of the birds, to wit, from April 1 to September 30, both inclusive, of each and every year.

Section 5. POLICE CONTROL. It shall be the duty of the chief of police, his assistants, and all policemen of the village to warn any owner or keeper of any cat who violates any of the provisions of this ordinance, that upon a second violation the cat will be killed, and if after such warning any such owner or keeper again violates the provisions hereof by neglecting to restrain his cat as herein provided, such cat shall be forthwith killed by such officer in some humane manner.

Section 6. TRESPASS. All persons shall have the right to kill any and all stray or unrestrained cats trespassing upon their premises at any and all times, and the owners or keepers of such cats so killed shall have no right of redress therefor.

Section 7. PENALTIES. Any person violating any of the provisions of this ordinance shall be subject to have his or her cat taken up and killed as herein provided, and shall also be subject to a fine of not less than \$2.00 nor more than \$5.00 for each violation of this ordinance.

Section 8. This ordinance shall take effect upon its passage, approval, and publication.

ROOSEVELT MEMORIAL FOUNTAIN

The following additional contributions toward the erection of the Roosevelt Memorial Fountain have been received:

Previously acknowledged . . .	\$11,684 19	Robert M. Carew	\$1 00
Mrs. A. F. Gilmore	4 00	Ann Rogers Clark Chapter D. A. R.	1 00
Symposium Club	1 00	Amelia Felkner	1 00
Arthur H. Braly	10 00	Mrs. Allen W. Clarke	1 00
Eggleston Club	1 00	Tuesday Club (St. James, Mo.)	2 00
L. E. Dennig	10 00	Mrs. J. W. Brownlow	1 00
Dr. C. M. Koontz	5 00	Civic League (Beaufort, S. C.)	1 00
Estes Park Woman's Club	5 00	Charles C. Bovey	5 00
Art Club (Anderson, Ind.)	5 00	Woman's Club (Mishawaka, Ind.)	1 00
Mason Mitchell	5 00	Bertha S. Miller	2 00
Charles H. Collins	1 00	Mrs. Alice C. Allen	1 00
Magazine Club (Columbus, Ind.)	1 00	Namiro Cabrera	5 00
Twentieth Century Club	1 00	McRae Club (Muncie, Ind.)	1 00
Miss Alice Richardson	1 55	Mrs. Ripley Hitchcock	2 00
Art Books and Crafts Club	1 00	Woman's Club (Montpelier, Vt.)	5 00
Miss Neva R. Wackerbarth	1 00	Woman's Club (Anchorage, Alaska.)	5 00
Century Club (Greencastle, Ind.)	1 00	Shakespeare Reading Club	1 00
Howard Club (New York City)	15 00	Mrs. Alfred M. Walter	5 00
Charles C. Gorst	5 00	R. R. Bowker	5 00
Hartford Bird Study Club (Conn.)	5 00	Woman's Research Club	1 00
E. O. Hovey	2 00	Mrs. Edward E. Allsopp	2 00
Mr. and Mrs. R. T. McCormick	5 00	Samuel Chesbro	2 00
Mrs. Lila B. Adams	5 00	Woman's Club (Greencastle, Ind.)	1 00
Mrs. Evelina C. Hardy	1 00	Audubon Club, Corning School No. 3	10 00
C. B. Riker	10 00	Longfellow Junior Audubon Class	2 00
Mrs. Jay H. Hart	5 00	Rockaway Bird Club	50 00
Indiana Sorosis Club	1 00	Raimundo Cabrera	20 00
George H. Warren	1 00	Harriet E. Wallace	1 00
Woman's Study Club (La Porte, Ind.)	1 00	Province of Quebec Society for the Protection of Birds	2 00
Westfield (Ind.) Woman's Club	1 00	Carrie E. Neubauer	1 00
Audubon Society (Skaneateles, N.Y.)	5 00	Tuesday Literary Club	1 00
Mrs. Robert G. Steele	1 00	Woman's Department Club (Indian- apolis, Ind.)	1 00
Judge Arthur J. Tuttle	5 00	Inwood (Ind.) Community Club	1 00
Harold Hoyt Taylor	1 00	James S. Clark	1 00
Roy M. Langdon	5 00	Mary Imlay Taylor	2 00
James L. Record	5 00	Mrs. Alexander Robb	5 00
Department Club (Elwood, Ind.)	1 00	Mr. and Mrs. Richard M. Hoe	100 00
Chambersburg (Pa.) Civic Club	1 00	Mary Mitchell	25 00
A. V. and Ella M. Arnold	1 00	Thomas F. Burgess	10 00
South Bend Woman's Club	1 00	Mrs. Henry Nicols	5 00
Cosmopolitan Club (Greenfield, Ind.)	1 00	Mrs. C. J. Edwards	1 00
Bowen Bird Roosters	1 00	Miss Clara T. Chase	5 00
Watertown Bird Club (N. Y.)	5 00	Mrs. Geo Chace Christian	5 00
Pasadena Audubon Society (Calif.)	5 00	Mrs. M. B. Edinjer	5 00
Mrs. Noel Statham	2 00	Wednesday Afternoon Club	2 00
Dr. George F. Kay	1 00	Mrs. A. L. Roache	1 00
Rev. George Bennett	1 00	Mrs. F. W. Houser	1 00
Pupils of Miss Gibson's School	3 00	Mrs. R. B. Clapp	1 00
Miss C. E. Howland	1 00	Mrs. P. W. Hudson	1 00
Mrs. Childe H. Childs	2 00	Roger S. Newell	5 00
Council of Jewish Women	1 00	H. M. Addinsell	5 00
Dr. Adelaide Mills	10 00	Austin B. Fletcher	10 00
R. S. Chilton	5 00	Audubon Club of P. S. No. 37	4 25
The Thursday Club	1 00	Linnæan Society of New York	200 00
Mrs. John L. Billard	5 00	Mrs. C. Oliver Iselin	500 00
J. D. Kuser	5 00	Missouri Federation of Women's Clubs	3 00
Prof. Austin P. Larrabee	1 00	H. H. Chamberlain	2 00
		Nature Study Club (Columbus, Ind.)	1 00

Public School No. 10 (New York City)	\$30 00	Miss Louisa I. Enos	\$10 00
Guy Emerson	5 00	Genge School Junior Audubon Club	1 50
Richard Crashaw Club	1 00	A. J. Hammerslough	2 00
Paul J. Kramer	1 50	Dr. and Mrs. C. B. Graves	2 00
A. E. Nye	2 00	Dr. Guy C. Rich.	1 00
Blue Jay Audubon Society	2 00	Mrs. M. B. Fowle	2 50
Junior Audubon Society, (Holden, Mass.)	1 00	Mrs. William H. Jasspon	2 50
T. S. Hathaway	5 00	Research Club (Greentown, Ind.)	1 00
David C. Halsted	5 00	Lewis S. Golsan	1 00
Junior Audubon Club (Buffalo, Wyo.)	1 50	Junior Bird Club (Westfield, N. Y.)	5 87
Thomas H. Howard	1 00	Randolph Bird Club	3 00
Mrs. Fred W. Sumner	5 00	Coventry Woman's Club (R. I.)	83 00
Charles W. Richmond	5 00	Miss Flora Brown	1 00
Study Club (Ashton, Idaho)	11 80	Dr. Wm. Frederic Bade	5 00
Mrs. Geo. Lee Bready	1 00	Joseph Brewer	25 00
Leon Israel	10 00	Beatrice S. deCamp	1 00
Mrs. Winthrop Jorden	5 00	Bay Tree Inn	1 00
Laura B. Whittemore	2 00	Miss Adeline S. Jordan	2 00
Edward Kemp	25 00	Oregon Audubon Society	26 00
F. C. Walker	2 00	Miss Katharine Matthies	1 00
Frank M. Warren	1 00	Mrs. M. V. B. Brinckerhoff	1 00
Bird Club (St. Louis, Mo.)	10 00	Dr. Frank M. Chapman	25 00
Ella D. Campbell	1 00	Ladies Literary Club	1 00
Mrs. F. W. Herz	5 00	Catholic Woman's Study Club	1 00
Mrs. John M. Nelson, Jr.	2 00	Mrs. Frank A. Vanderlip	1 00
George S. McCarty	1 00	Mr. and Mrs. John L. Lawrence	10 00
Guy W. Von Schrlitz	1 00	Mrs. B. S. Holt	2 00
James L. Ward	1 00	Greystone Park Bird Club	2 50
Lloyd Smith	1 00	Miss Alice Robinson	3 00
Lonnquist Audubon Society	1 00	Mass. Audubon Society (addiional)	2 00
Art and Travel Club	5 00	Anonymous	1 61
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			\$13,488 27







1 CANADA JAY
2 OREGON JAY

3. PIÑON JAY
4. CLARKE'S NUTCRACKER

(About one-third natural size)

Bird-Lore

A BI-MONTHLY MAGAZINE
DEVOTED TO THE STUDY AND PROTECTION OF BIRDS
OFFICIAL ORGAN OF THE AUDUBON SOCIETIES

Vol. XXI

NOVEMBER—DECEMBER, 1919

No. 6

Notes from a Traveler in the Tropics*

By FRANK M. CHAPMAN

V. CHILE

With illustrations by Louis Agassiz Fuertes

FROM LA PAZ one may reach the Chilean coast by an eighteen-hour railroad journey to Arica, or by one of thirty-six hours to Antofogasta. The latter is by far the more interesting, not alone because it requires double the time, but also because it passes through a more highly diversified region. The recently constructed line of the Antofogasta and Bolivian Railway, from La Paz to the tableland, affords views of the great bowl in which this city lies which, in their great breadth and beauty, remind one forcibly of the Grand Cañon. This panorama of sculptured walls and pinnacles, of green slopes leading to the red-tiled roofs below, of the snow-crowned Cordillera towering high in the background deserves, indeed, to rank among the most noteworthy features of South American scenery.

From our slow, tortuous, winding way, a thousand feet up the side of the cañon, we suddenly emerge upon the flat puna, stretching in illimitable distances to blue and, occasionally, snow-capped mountains. The scant herbage, spread thinly over the rock-littered earth, supports countless herds of sheep and llamas, which, accompanied by their poncho-clad Indian guardians, form the characteristic feature of every picture.

Of birds I saw comparatively few. White-throats (*Brachyospiza*) were abundant in La Paz, and on the surrounding hillsides there were a few Sooty Thrushes (*Semimerula*), Puna Finches (*Phrygilus gayi punensis*), and small flocks of coal-black Goldfinches (*Spinus atratus*), whose wings, in flight, appeared to be wholly yellow, giving them a most unusual appearance.

On the tableland the fine Spur-winged Plover was a constant attraction; but although small sloughs and streams offered apparently suitable haunts, there was not that display of bird-life which so amazes one north of Lake Titicaca.

*Concluded from BIRD-LORE for May-June, 1919.

All night we traveled over the puna at an average elevation of about 13,000 feet, arriving the next morning at Uyuni. Here we turned westward. The grazing country was now left behind, and for hours we crossed glistening salinas devoid of both plants and birds.

The boundary line of Bolivia and Chile is marked by the active volcano of Ollagüe, from the snow-capped cone of which a thin plume of smoke waved



LAGO DE SAN PEDRO DE ATACAMA, NORTHERN CHILE, WHERE FLAMINGOES NEST
TWO MILES ABOVE SEA-LEVEL

Photographed by H. C. Bellingier

At this point the descent to the coast begins. The way lies across the desert of Atacama, an essentially rainless region, and one of the most arid in the world. The earth is almost as devoid of vegetation, as naked as it was in the beginning, and the story of its external structure may be read as one passes. On every side are evidences of tremendous volcanic activity, and the still smoking cones of Ollagüe and San Pedro suggest possibilities which forcibly connect the present with the past. There are lakes thickly encrusted with borax, with open water appearing here and there, as it does through slushy ice in a spring thaw, wide-stretching, hopelessly desolate nitrate fields, and mining 'camps' to mark the mineral wealth hidden in these bare mountains. At one of these 'camps,' the town of Chuquicamata, our Red Cross duties occupied us for a week. Mining engineers and sociologists will find at Chuquicamata object lessons of intense value and interest in the results of American efficiency applied to metallurgical and labor problems, but it is not a productive field for an ornithologist. Not one bird did I see here during the week of our stay. At the neighboring town of Calama where the Loa supplies water for irrigation, White-throats (*Brachyspiza*) and Swallows (*Atticora cyanoleuca*) were abundant and, on the way, two Desert Flycatchers (*Muscisaxicola*) were seen. These, with two Stilts (*Himantopus*) and a Duck observed in one of the borax lakes, a Sparrow, a Hawk, and three Turkey Vultures, seen between Calama and Antofagasta, were all the birds recorded between Bolivia and the Pacific coast.

The region, however, is not wholly devoid of attractions for the bird-student. An engineer, whom I met on January 1, had just come down from the Andean valley of San Pedro where, at an elevation of about 11,500 feet, he had found a colony of Flamingoes nesting on a shallow lake. There were, he said, large numbers of young birds. While Flamingoes must, of course, nest at numerous places in the high Andes, from Lake Junin in Peru southward, I know of no other breeding colony which has been definitely located.

January 4, we reached the coast at Antofogasta and the following day sailed for Valparaiso. After the lifelessness of the desert, the abundance of marine birds impressed me with added force. There were Gulls, Pelicans, Cormorants, and Gannets, and, farther from land, Shearwaters and Petrels of several species. On March 15, when, homeward bound, we dropped anchor for a few hours off Antofogasta, the waters swarmed with the small sardine-like fish, which apparently form the chief food of the fish-eating birds of the coast, and the birds were correspondingly abundant. The fish closely approached the shore about the docks and shipping, and the birds followed them. There resulted a confusion of tugs, launches, lighters, and rowboats which supplied an unusual setting for the birds' activities. Over great swelling waves we rowed ashore through the mêlée with, on every side, Gannets and Pelicans plung-



THE DIUCA
(About two-thirds natural size)

ing from the air and Cormorants and sea-lions appearing from below—all in pursuit of the unfortunate fish. In places the water was covered with floating islands of Cormorants and the shore was thickly lined with Pelicans and Gannets whose hunger, for the moment, had been appeased. It was a memorable scene.

Slightly south of this latitude, on August 15, 1916, I saw my first Wandering Albatrosses, swinging, circling, sweeping to right or left in broad curves, skimming over the water, disappearing for a moment in the trough of the waves, or tossing suddenly upward to be clearly outlined against the sky with



THE ACONCAGUA VALLEY. A TYPICAL SCENE, SHOWING THE CHARACTERISTIC BUSHY VEGETATION OF CENTRAL CHILE

one wing pointing upward, the other down. At all times they faced the gale calmly, serenely, without evident effort, while the steamer labored painfully onward, pitching, rolling, groaning in the toils of the sea.

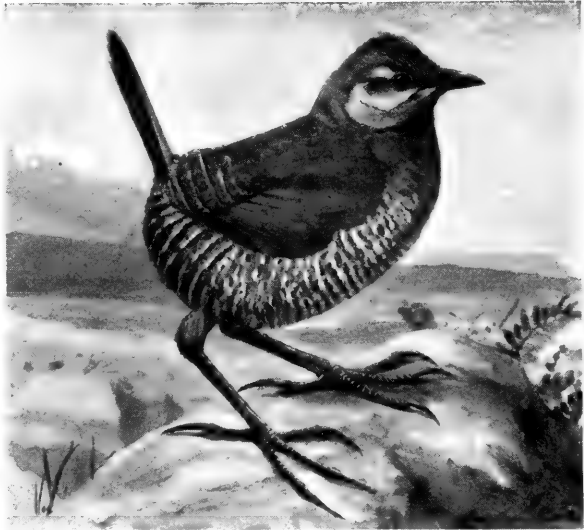
We reached Valparaíso January 7, 1919. It was approximately midsummer and compared with conditions which we had found there on August 16, 1916, the harbor was almost without birds. On the last-named date there were, in addition to great numbers of Gulls, Cormorants, and Gannets, hundreds of Penguins. Doubtless in January many of these birds were on their breeding-grounds, while in August they thronged the harbor, just as Herring Gulls, for example, do the harbors on our Atlantic coast in winter.

We had now entered the northern part of the humid South Temperate Zone, and, as a result of the small annual rainfall, found the hills and plains covered with a bushy, chaparral-like vegetation which, in favorable situations

along streams or in drainage areas, assumes some luxuriance. Both eucalyptus and poplars have been successfully introduced and are sufficiently abundant to form a marked feature of the landscape of central Chile.

My duties for the Red Cross left small time for field excursions about either Valparaiso or Santiago, nor was the season a favorable one for the study of birds. I can therefore give a more adequate sketch of the principal characteristics of the bird-life of central Chile by relating briefly certain observations made in the vicinity of Santiago in the early spring (August 23-25) of 1916.

At this season there was a yellow-green veil over the willows, about springy places the grass was emerald, and peach trees were beginning to bloom. Frogs croaked in the marshes, great flocks of Goldfinches made the poplars vocal, a small Woodpecker called *peek*, almost exactly like our Downy, and rolled his drum. Swallows gurgled, and from the beds of old cat-tails a Yellow-shouldered Blackbird uttered a call-note strangely suggestive of that of his far-away red-shouldered cousin.



EL TURCO

In fact, both eye and ear were reminded, by many obvious and other more subtle influences, of spring in the North Temperate Zone.

The Red-breasted Trupials (*Trupialis militaris*) passed in straggling flocks like Robins returning to their roost, and their flight-note recalled that of a Robin, but their flight-song was more like that of a Meadowlark. One did not often get a view of their brightly colored breast, but when seen it flashed like a railway signal.

With the more familiar sights and sounds there were mingled others which had no place in one's memory of a spring at the North.

Everywhere the gray Diuca Finches (*Diuca diuca*) were abundant. While their song bears a slight resemblance to that of our Rose-breasted Grosbeak, the birds themselves are quite unlike. The Diuca is doubtless the most abundant of Chilean land-birds. One sees it everywhere, along the roadsides, on telegraph wires, in gardens, in the bush-covered foothills, in cages and in the markets, for it is valued both as a pet and as a source of food. There is appar-

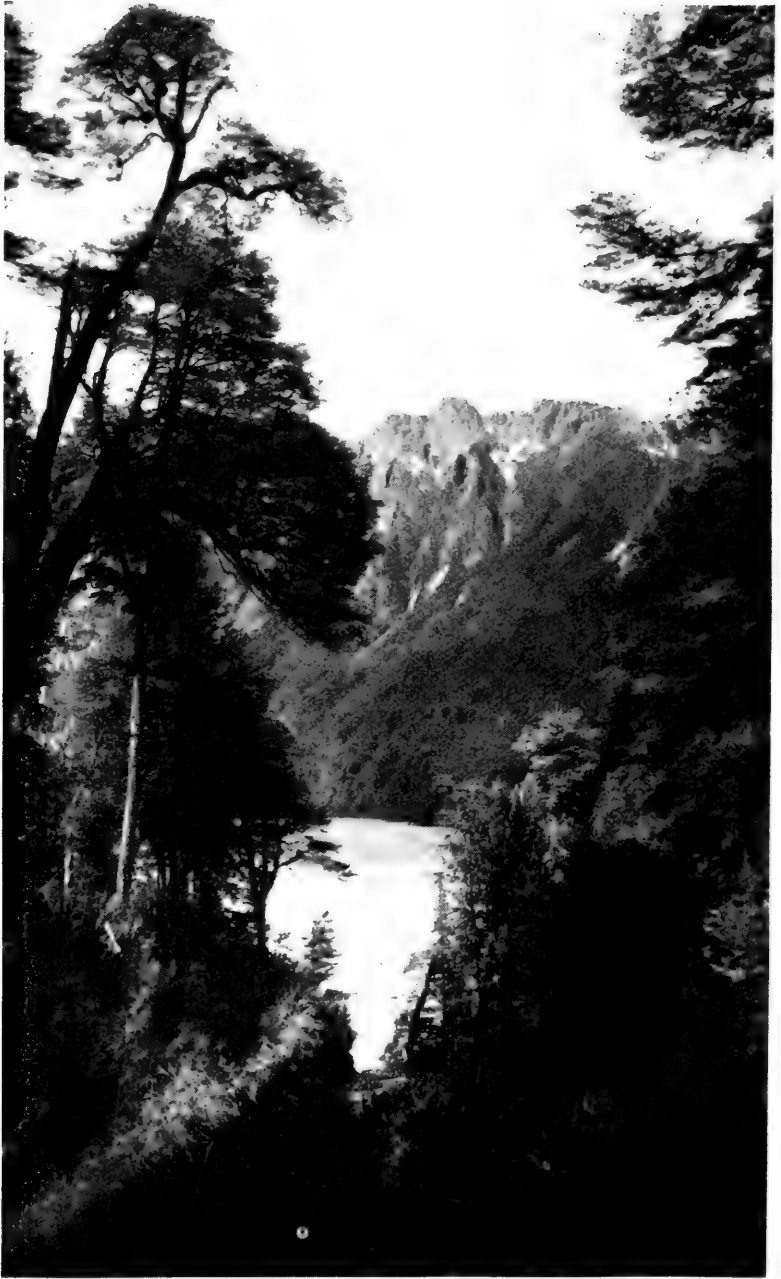
ently no law protecting the Diuca, and the Italian element in the Chilean population traps it, as well as other small birds, by thousands. A visit to the Santiago market showed strings of Goldfinches, White-throats, Diucas, and Thrushes which, plucked, were sold for about thirty cents a dozen. The Diuca however, is apparently too well adapted to its environment to be perceptibly diminished in numbers by the activities of market hunters.

At Apoquindo, in the foothills of the Andes, about nine miles east of Santiago, I found more characteristic features of Chilean bird-life. Here there was no cultivation and the scrubby vegetation occupied the slopes and barrancas. The ground was white with frost each morning, and the air was fresh and invigorating. When the sun climbed from behind the Cordillera there was a ringing chorus of spring song. The ever-present White-throats contributed their sweet, plaintive notes; Mockingbirds called sharply, *chucker-chuck*, *chucker-chuck*, and whistled shortly; there were Trupials, Diucas, and Swallows, while, from the dense scrubby growth which covered the slopes of the foothills, there came a series of thrilling calls, loud and striking in character. Some were wholly unlike anything I had ever heard before; others suggested notes with which I was familiar. They came from every side, often so near as to be startling. At times six or eight birds called at once but the most careful stalking failed to reveal the callers. Taking a position which commanded a view of my surroundings, I sat down and carefully watched every opening in the vegetation for a view of the unseen singers. It was not long before a bird about the size of a Quail, like a mysterious little gnome, hopped up on a rock about forty yards distant and uttered one of the singular calls which had so excited my curiosity. He called only once or twice, when, apparently alarmed, he jumped to the earth, and, with long tail erect, ran down the hillside with astonishing rapidity, sailed across a gully and disappeared. I recognized it as El Turco, a species of the genus *Hylactes* found only in central Chile. Later, I discovered that El Turco was assisted by the Tapacola (*Pteroptochus albigollis*) in producing the remarkable series of calls which gave so strange a character to the morning chorus. Without always being able to attribute each call to its author, I find the following descriptions entered in my notebook:

1. A hoarse *bow-wow-wow-wow-wow*, becoming hoarser on the final notes, and exactly like the bark of a distant dog. Previous authors, I find, state that this call is produced by *Hylactes*.
2. A sharp, high, sudden marmot-like whistle, such as one utters to attract attention.
3. A liquid *whit-whit-whit-whit* many times repeated.
4. A rich, flute-like, diminishing whistle strongly suggestive of the soul-stirring calls of the great Goatsucker (*Nyctibius*).
5. A Cuckoo-like call which may be the dove-like notes ascribed to the Tapacola.
6. A call like that of a Guinea Hen:



GIANT HUMMINGBIRD AND THE CHILEAN RUBY-CROWNED HUMMINGBIRD
IT HAS CAPTURED
(One-half natural size)



LAGUNA FRIA.—A SCENE IN THE HUMID SOUTH TEMPERATE ZONE IN ARGENTINA
NEAR THE CHILEAN LINE

A seventh call was strangely familiar, and, to my intense surprise, I learned that it was uttered by a California Valley Quail!

There are so many things in Chile which suggest California that when I succeeded in identifying the characteristic little crowing *sit-right-down, sit-right-down*, and heard it uttered by numbers of birds, I was not, for a moment, certain whether I was on the north or south Pacific coast. The mystery was explained by an American sportsman I subsequently met in Santiago, who informed me that Valley Quail had been introduced from California into Chile, at Coquimbo, in 1837. They are now among the common birds of central Chile.

The blossoms of the eucalyptus trees about our inn at Apoquindo were frequented by such large numbers of Hummingbirds that at times the air 'buzzed' as it would about a bee-hive. By far the larger number were the common green, ruby-crowned species (*Eustephanus galeritus*), a bird nearly twice the size of our Ruby-throat, and there were also a few Giant Hummers (*Patagona gigas*), the largest of all Hummers, with a length of eight inches. The larger birds seemed in constant pursuit of the smaller ones, after the aggressive manner of Hummers, and on one occasion I saw a Giant Hummer actually catch a Ruby-crown, fly with it in his claws about a hundred feet, where, some fifteen feet from the ground, he paused for about fifteen seconds facing the trunk of a eucalyptus, when the smaller bird succeeded in making its escape and flew away, apparently unhurt.

Patagona feeds chiefly on insects which it catches in the air or from flowers, and it is not conceivable that its capture of another Hummer was prompted by other than the vicious disposition of its family.

Chile may roughly be divided into three districts: The northern desert, the central semi-arid, and the southern humid. Their character is determined by the amount of rain they receive, which, from practically nothing in northern Chile, reaches more than 300 inches annually in southern Chile. It may also be said that from practically no vegetation at the north, we pass through gradually increasing zones of fertility to the luxuriant forests of the south. There is, of course, a corresponding change in bird-life, but it is a change in character, not in abundance, for the forests of southern Chile are far from supporting the numbers of species or individuals which one might expect to find in them. My journey through southern Chile was made too rapidly to permit of more than the most casual observations of birds. The bird-life of the high, bare tablelands is readily seen, but no tropical forest I have worked in is denser than the rain-soaked woods of southern Chile.

Some day I hope to return to this region as an ornithologist, when with good fortune, I may gather material which will warrant my writing of its birds. Meanwhile, I commend it to the attention of all travelers in South America as a country of rare beauty and intense interest. The naturalist who can determine the origin of its fauna will make a contribution of high importance to our knowledge of the earth's history and the study of the distribution of life.



THE CAMERA AND ATTACHMENTS IN POSITION NEAR A BIRD-BATH. IT IS NOT NECESSARY TO DISGUISE THE CAMERA

How Birds Can Take Their Own Pictures

By DR. E. BADE, Glen Head, L. I.

With photographs by the Author

MAN is the friend of the birds. Their restless spirit brings life into nature as they flit from bush to bush, or from tree to tree, or when they fill the air of the forest and the meadow, the field and the garden, with their beautiful song. Filled with the pulsation of life, they are happy and care-free as long as the sun laughs from a clear sky, and know nothing of the sorrows and cares of providing for a hungry stomach. They never sow—they only reap—for everywhere food can be found in plenty.

In the course of a year the entire history of bird-life unfolds itself to the eager eye of the lover of nature. But the few happy and instructive hours which can be devoted to the study of bird-life in the open are only too short. Then the wish to fix the bird, its home, and its habitat upon the photographic plate makes itself felt, in order, as he reviews the photos, to conjure back those fruitful hours whose incidents are indelibly stamped on the picture.

It is not too easy nor any too simple to take pictures of these lively little animals, since many aids and professional secrets must be used if the resulting photographs are to be a success. Of course, a good lens and an efficiently working shutter are essential. A double anastigmat lens will generally be sufficient, especially if it is of excellent make. When these lenses are used at full speed—and they must be used at full speed—they require accurate focusing, and this can only be done with the device to be described. Although snapshots of animals can only be taken successfully with such a lens, the plate will always be underexposed. Therefore they should be developed in weak fixing bath which develops the plate more uniformly than a normal or strong solution would.

Developers for snapshots should always be diluted with water so that the

fixing is somewhat slower, giving the shadows a better chance to develop before the light places become too strong. One should not forget that the slower the process of fixing the stronger will be the contrast between light and shadow.

Retouching negatives, which are to be used for scientific purposes, is not allowable. Blotched pictures, or those which represent animals with white or black spots, as well as those which require long titular explanations, although nothing can be seen on the photograph, are worthless. In some other cases, animal photographs are carefully taken from stuffed representatives, and these, when they have been given a suitable title, are sent out into the world as photographs taken from living specimens. No special knowledge is required to give these photographs their real value, for when one has closely examined a photograph of the living specimen, one can easily determine a photograph taken from the stuffed animal.

Some of the peculiar poses of animals taken from life throw a strong light upon our artists of today who show us very different pictures. It is interesting to compare good animal photographs with good drawings. For instance, a bird will be drawn in ten different ways by ten artists, and each artist will bring out the characteristics of the same bird in a different way. If such a drawing is enlarged a number of times with a stereopticon lantern the faults will be so



TOWHEE

greatly magnified that they will leap at the observer, but a photograph under the same conditions will retain all of its beauty.

The difficulties of taking good animal pictures in the open are great, but the resulting pictures justify all the work that has been expended on them. The most difficult pictures that can be taken are those of birds, since one can seldom come within reach of them with a camera, and if one does come within range, then the light conditions are unfavorable for snapshots. If, in spite of all this,

one desires to take bird pictures, some kind of a device must be used which will overcome the inherent shyness of these animals. The simplest place for taking bird pictures is at, or near, bird-baths or bird food-houses, where the shutter of the camera will be closed electrically by the bird itself. The necessary preliminary apparatus is simple and the results obtained are most satisfactory. I, at least, use no other method after having experimented with, and used, all kinds of devices for years, devices which were tried and approved by both amateur and professional but which still gave unsatisfactory results.

The most important contrivance necessary for the birds taking their own pictures is a device which will close an electric circuit at the appropriate second



CATBIRD

by the bird's own weight. In order to get certain and easy results, the device is built in the form of a balance, one arm of which is kept in equilibrium so that the other, carrying the electric contacts, do not close the circuit unless the bird should spring on this arm, which will then sink and close the circuit. The same instant the core of an electro-magnet is charged, it pulls one arm of an angle iron downward while the other arm, pushing sideways, closes the shutter of the camera, thus securing a snapshot of the bird.

The scale should not be too delicately built. For song-birds it should have at least, a width of 4 inches. One arm of the scale is bent downward near the place of attachment and a small box fastened to the extremity in which small stones, etc., can be placed to counterbalance the other shorter arm to which a twig or other suitable object is attached to facilitate the approach of the bird. The contact consists of V-shaped pieces of copper, one end of which rests in a copper or brass groove while the other end should only touch a second groove when the weight of a bird presses the contact scale downward which closes the circuit.



JUNCO

The entire contact scale is covered, before it is used, with a box having a covering of bark, the twig only projecting.

The release of the snapshot shutter differs with the different cameras, so that the electrical release must be adapted to the camera used. The shutter of a 'Graflex' is released with a button. If an angle iron is taken, one arm receives a knob which can press the button of the camera, the other arm, which is placed so that it rests about $\frac{1}{8}$ of an inch above the electro-magnet, is balanced so that a slight added pressure is sufficient to release the shutter. This is received from the magnet. When the bird is sitting on the twig, it closes the



MYRTLE WARBLER—WINTER PLUMAGE

circuit, draws the angle iron downward, and the knob, pressing against the button of the shutter, releases it, and the picture is taken.

It is absolutely unnecessary to hide or cover up the entire apparatus; the birds do not take any notice of the whole affair whatsoever.

He who desires to take pictures near bird-baths or bird food-houses will do well to introduce a bell into the circuit which will ring when a picture has been taken. Then it is only necessary to change the plate in order to be ready for the next photograph. But under these circumstances the wires must be led into the house. It is also very convenient to introduce a push-button. Now the circuit can only be closed when both the button is pressed and the bird is sitting on the branch. Therefore, it is in the hand of the observer to take only those birds which he desires to take. With this the pictured birds will always have detail, as the twig is only an inch or two in length and the camera is sharply focused on the branch, and it is therefore of great value to the student wishing to take accurate pictures of birds in their natural habitat.



FEMALE SCARLET TANAGER

One Family of Flickers

By ANNA ROGERS ROBERTS, Marietta, Ohio

INSISTENTLY he screeched as he sat on the lower limb of the white lilac. Over him towered the giant elm which had been the home of his kin for more than a generation. Its broken skyline had once been continuous; its diminishing shade had few other causes than the activities of this same proud and beautiful bird. Deep holes, dug first into one branch and then another, had caused limbs to decay as they filled with water, swelled with freezing, loosed with cyclonic winds, until a still day saw havoc, and a quiet night witnessed destruction.

But little cared he, this bird with the powerful bill, red crown, black crescent, flecked breast, yellow wings, spotted back, and bristling tail. He had just finished a long journey and he wanted to clean—then eat. But that cleaning! Did you ever watch a Flicker dress? No dandy takes more pains. Every feather is made to shimmer as gold of sunset through lace-leaved trees. He feels no hurry; he loves detail, and in his businesslike manner you detect a purpose. It took him an hour, and then came—at least it seemed to me—an act of human intelligence.

Trees were leafless, though sap was mounting. He flew to the topmost limb of a large walnut, and I know of no other way to express his attitude than to say, he studied the situation. This way and that he looked. For one of less courage, the prospect was cheerless. Bare trees and bleak earth. But that fierce eye looks and looks, that powerful head turns in every direction. Finally his decision is reached. Straight to the tower he flies, and the roll of his tattoo on the tin spouting rivals the snorting engines two squares away. Who can compute the number of motions the long bill makes as the strident noise continues? He is terribly in earnest, he must make her hear! An old lamp-post with a metal shade is attacked next. Its rattle suits, for there he stays two days, hammering and screaming, almost incessantly. You wonder when he eats. Then,—over the hill, *Harmar Hill*,—a yellow blur! No—two—and he has company. Royally he greets them; they are his own, though strangers an instant gone. Their *yicker, yicker, yicker* is the sweet prelude of their joyous homing season. Best of friends, they feed at a common table, such as it is—the damp smoothness of the faintly green-tinged flats. For several days they play, hunt, and share their findings with each other.

Then the time approaches for the trials of skill for the possession of the beautiful lady. First, the trial by flight. From bush to tree, from flat to height, from ground to tower they fly, scarcely lighting. One day—two days—even into the third day, the winged battle continues. Neither rests while she watches. The high, magnificent sweep of the first day becomes lower and heavier on the second, and you are relieved when darkness falls and the tired wings fold for the night. The third day, the unfeeling lady calls a halt, and new tests are

proposed—quiet ones—strutting, bowing, spreading the feathers, twisting the neck, ogling the head, beating a tattoo, playing hide and seek round the trunks of the Japanese cherry, the silver birch, and the elms. Then one flies away to become a winner elsewhere and the other two think of a home.

To last year's haunts they go. The English Sparrows had found that long, deep hole and filled it with chicken feathers, moss, sticks, strings, etc., and the two birds work hard at house-cleaning for several days. The falling trash testifies to their industry. The theory that nests are used but once is not true of all birds. I have, repeatedly, seen a nest, such as borers make, used the second time. The glossy, white eggs, for which such elaborate preparations have been



"THE GIANT ELM WHICH HAD BEEN THE HOME OF HIS KIN FOR OVER A GENERATION"

made, lie snug and safe in this dark, warm hole, and a new task confronts the husband. Patiently and unceasingly he bestows his 'Flicker' care on the chosen partner of his toils. She calls him to take her place when she needs air, food, and water—and he always answers. The purple flush of incoming day invariably brings him to her, with the caressing *yicker, yicker, yicker* of his love-song. Little they think of tragedy, of disaster, as they wait the day when shells burst and tiny, wet bodies press against them, opening huge mouths blindly and awkwardly for nourishment.

In due time five move and eat. Father and mother fly away for another morsel, when, without warning, the limb falls, breaking into fragments as the soft wood hits the hard earth forty feet away.

A still cloudless day it is, and I was watching the excitement and unusual activities of the parents, thinking the mother's patient wait was over. Going to

the spot, I picked up the five fledglings, now dead, and was wondering what to do, when I heard a whirl, a scream, and another and then another! Where once had been all was now nothing, and they could not understand. Up and down the ugly, gaping tree-wound, over it, around it, they go screaming and screaming. Gone for a moment, then back to repeat the hunt! For two days this continued, then a few days of dispirited loneliness, and then a new limb is selected, a new hole is made, and this time quickly, for summer approaches high tide, and once more glossy, white eggs, are safe and snug in a warm, dark hole. Again the long wait; once more there are little ones to feed; and then, after a while, one baby head, and then two, three, four, and five, peep out. Later five speckled birds sprawl flappily among the elm leaves.

When old enough to take down to the flats where the coveted ants abound, they made a charming picture—this flock of seven. They were always together, and I could sit close to them and witness many a cunning play. They loved our old home, with its wide-mouthed chimneys and long water-spouts on which such glorious 'music' could be made. One used to hang on the kitchen screen, where I put suet for him. A newsboy hurt one, and I cared for his wound, Another lost his way in one of the chimneys and my husband tore the gas-fixtures out to rescue him, and had hard work to hold him so his strong bill did no damage. We stroked and petted him awhile, then released him, and his Indian-like yell as he spread his lovely wings was a song of triumph. He circled our grounds several times and then flew home!

We had many Flickers. We loved and encouraged them in all possible ways to stay with us. The ivy berries were a source of delight after Jack Frost closed the ant-hills and insect hum was hushed. As I write I hear the long rolling tattoo, the high, sustained *tat-tat-tat-tat-tat*, and I feel it is his farewell. Perhaps I shall see him

When the primrose makes a splendid show,
When lilacs face the March winds in full blow,
And humbler growth as moved with one desire
Put on to welcome spring, their best attire.



Bird-Lore's Twentieth Christmas Bird Census

BIRD-LORE'S Annual Bird Census will be taken as usual on Christmas Day, or as near that date as circumstances will permit; *in no case should it be earlier than December 22 or later than the 28th*—in the Rocky Mountains and westward, December 20 to 26. Without wishing to appear ungrateful to those contributors who have assisted in making the Census so remarkably successful, lack of space compels us to ask each census taker to send only *one* census. Furthermore, much as we should like to print all the records sent, the number received has grown so large that we shall have to exclude those that do not appear to give a fair representation of the winter bird-life of the locality in which they were made. Lists of the comparatively few species that come to feeding-stations and those seen on walks of but an hour or two are usually very far from representative. A census-walk should last *four hours at the very least, and an all-day one is far preferable*, as one can then cover more of the different types of country in his vicinity, and thus secure a list more indicative of the birds present. Each report must cover *one day only*, that all the censuses may be comparable.

Bird clubs taking part are requested to compile the various lists obtained by their members and send the result as one census, with a statement of the number of separate ones it embraces. It should be signed by all observers who have contributed to it. When two or more names are signed to a report, it should be stated whether the workers hunted together or separately. Only censuses that cover areas that are contiguous and with a total diameter not exceeding 15 miles should be combined into one census.

Each unusual record should be accompanied by a brief statement as to the identification. When such a record occurs in the combined list of parties that hunted separately, the names of those responsible for the record should be given. Reference to the February numbers of BIRD-LORE, 1901-19, will acquaint one with the nature of the report that we desire, but to those to whom none of these issues is available, we may explain that such reports should be headed by the locality, *date*, hour of starting and of returning, a brief statement of the character of the weather, whether the ground be bare or snow-covered, the direction and force of the wind, the temperature and the distance or area covered. Then should be given, *in the order of the A. O. U. 'Check-List'* (which is followed by most standard bird-books), a list of the species noted, with, as exactly as practicable, the number of *individuals* of each species recorded. A record should read, therefore, somewhat as follows:

Yonkers, N. Y. (to Bronxville and Tuckahoe and back).—Dec. 25; 8 A.M. to 4.30 P.M. Clear; 5 in. of snow; wind west, light; temp. 38° at start, 42° at return. Eleven miles on foot. Observers together. Herring Gull, 75; Bob-white, 12 (one covey); (Sharp-shinned?) Hawk, 1; . . . Ruby-crowned Kinglet, 1. Total, 27 species, about 470 individuals. The Ruby-crown was studied with 8x glasses at 20 ft.; eye-ring, absence of head-stripes and other points noted.—JAMES GATES and JOHN RAND.

These records will be published in the February issue of BIRD-LORE, and it is *particularly requested* that they be sent to the Editor (at the *American Museum of Natural History, New York City*) by the *first possible mail*. It will save the Editor much clerical labor if the model here given and the order of the A. O. U. 'Check-List' be closely followed.—J. T. N.

A Winter Feeding-Place for Birds

By VERDI BURTCH

With photographs by the Author



LAPLAND LONGSPUR

IF YOU want to see birds in winter, advertise by putting out food where they can get it and be safe from cats and dogs, and you will be surprised to observe how quickly it will draw customers and how they will increase in numbers day by day.

In cleaning grain, our local elevator accumulates quantities of weed seeds which we were able to obtain for the asking. We scattered a lot of this seed

near an unused building which stands at the edge of the field. Then we cut holes in the side of the building for our camera lens and for observation, and here Mr. C. F. Stone and myself had great sport for more than a month.

The English Sparrows were first to find the seed but the Tree Sparrows were not far behind; then a Song Sparrow came, and soon a few Horned Larks appeared.

Every day the birds increased in numbers. February 27, 1916, was very cold, with brisk northwest wind and little flurries of snow. We were in the building nearly all day and kept a good supply of feed out all of the time. We now had a fine bunch of Tree Sparrows and Horned Larks, and soon a bunch of Snowflakes dropped in, and what a scramble there was, Tree and English Sparrows, Horned Larks and Snowflakes in a seething, bubbling mass, flying up and over each other in their eagerness to get the food. Then suddenly, as if at a signal, they would all fly up and away, the Sparrows to the nearby bushes and the Larks and Snowflakes away down in the field where they lit in the snow. Soon a Tree Sparrow would come back, then several more, then the Larks would come in little short runs, then the Snowflakes, and lastly the English Sparrows.

Some birds were quite pugnacious, flying at any other bird that came near. The Tree Sparrows and the Song Sparrow were more so than the Larks and Snowflakes, but the English Sparrows seldom showed fight. The Song Sparrow

was like a whirlwind when it attacked, driving every other bird from the feeding-place, and before you could count 'two' it would have the field cleared and be quietly feeding again.



SNOW BUNTING

Our talking did not disturb the birds in the least, but a slight movement of the camera, the slamming of a door on the street, or a sudden gust of wind, would send them all in the air, the Sparrows to the bushes and the Larks and Snowflakes down in the field, but in less than five minutes they would all be back feeding again.

Next day the Snowflakes were absent and we did not see them again until



HORNED LARKS AND SNOW BUNTINGS

March 5. It was still cold and blustery, with light snow falling, so we had to keep putting out more seed as the snow covered it. The Tree Sparrows and Larks, both Horned and Prairie Horned, came in increasing numbers until there were more than forty of the Larks. A single Snowflake appeared, and at 3.30 P.M. a stranger was noted. It did not take us long to identify it as a Lapland Longspur, the first one that either of us had ever seen; then ten more Snowflakes dropped in, and what sport we had watching that active and eager bunch of birds on the ground-glass of our cameras. The next day we had another surprise when a female Red-winged Blackbird came, and I doubt if anyone else ever saw a Red-winged Blackbird, a Lapland Longspur, Snowflakes, Horned



PRAIRIE HORNED LARKS—MALE AND FEMALE

Larks, Prairie Horned Larks, Tree Sparrows, a Song Sparrow, English Sparrows, and Ring-necked Pheasants all feeding together in one flock.

The Snowflakes and Longspur were not seen after this. We had alternate cold and warm weather, the last cold spell being March 20 to 22, when I was feeding more than sixty Larks, about twenty Tree Sparrows, the female Red-wing and several hen Pheasants. Then the weather turned warm, the snow rapidly disappearing, and the feeding-place was deserted except for English Sparrows. The early migrants came with a rush on March 25, Bluebirds, Red-wings, Killdeer, Meadowlark, Purple Finch, and Song Sparrow, and Cowbird, Bronzed Grackle, Phoebe, Sparrow Hawk, and Fox Sparrow on March 26. A Fox Sparrow was the last to visit the feeding-place and be photographed.

The Migration of North American Birds

SECOND SERIES

XI. CANADA JAY, OREGON JAY, CLARKE'S NUTCRACKER, AND PIÑON JAY

Compiled by Harry C. Oberholser, Chiefly from Data in the Biological Survey
(See Frontispiece)

CANADA JAY

The Canada Jay (*Perisoreus canadensis*) is confined to the forests of Canada, Alaska, the northern United States, and the Rocky Mountain region. Its well-known habits about mountain camps have earned for it the name of 'Camp Robber.' It is almost strictly resident, although it straggles occasionally in winter beyond the southern limits of its breeding-range. It is divided into five subspecies, the ranges of which are given below.

The **Canada Jay** (*Perisoreus canadensis canadensis*) is resident in the northeastern United States and middle Canada, north to central Quebec, northern Ontario, and the northern limit of trees in northern Manitoba and northwestern Mackenzie; west to eastern Alaska, northwestern British Columbia, central western Alberta, and northeastern Wyoming; south to northeastern Wyoming, southern Manitoba, northern Minnesota, northern New York, northern Maine, and New Brunswick, east to New Brunswick and eastern Quebec. It is also of casual occurrence during winter south to Massachusetts, Pennsylvania, and Nebraska.

The **Rocky Mountain Jay** (*Perisoreus canadensis capitalis*) ranges in the Rocky Mountain region north to southern Alberta and central British Columbia; west to central Oregon, northeastern Utah, and eastern Arizona; south to central eastern Arizona and northern New Mexico; east to middle New Mexico, central Colorado, southeastern Wyoming, and central Montana.

The **Alaska Jay** (*Perisoreus canadensis fumifrons*) is resident in the forest regions of Alaska, south to Cook Inlet.

The **Labrador Jay** (*Perisoreus canadensis nigricapillus*) inhabits northern Ungava (Quebec) and Labrador.

The **Newfoundland Jay** (*Perisoreus canadensis sanfordi*) is apparently confined to Newfoundland and Nova Scotia.

OREGON JAY

The Oregon Jay (*Perisoreus obscurus*), a close ally to the Canada Jay, occurs in the Pacific Coast region of the northwestern United States and southern British Columbia. Its three subspecies, with the geographical distribution of each, are as follows:

Oregon Jay (*Perisoreus obscurus obscurus*). Resident in the Pacific Coast region of the northwestern United States, east to the Coast Ranges, from

Humboldt County, California, north through western Oregon and western Washington to northern Chehalis County, central western Washington, and, at least in winter, to Kitsap County, Washington.

Gray Jay (*Perisoreus obscurus griseus*). Resident in the northwestern United States, east of the Coast Ranges, from central northern California, north through the Cascade region of west central Oregon (west to Washington County) and central Washington (except the Puget Sound region), to southwestern British Columbia, including Vancouver Island.

Rathbun's Jay (*Perisoreus obscurus rathbuni*). Resident in northwestern Washington north to Snohomish County and Strait of Juan de Fuca; west to western Clallam County; south to Clallam County and King County; and east to central King County and western Snohomish County.

CLARKE'S NUTCRACKER

Clarke's Nutcracker (*Nucifraga columbiana*) is an interesting and peculiar species allied to the Crows and Jays. It is the only representative of its kind in North America but there are other species in the Old World. It occurs only in the western part of North America, where it breeds north to central British Columbia and northwestern Alaska; west to the coast of Alaska, western British Columbia, western Washington, and western California; south to southern California, central Arizona, and northern New Mexico; east to central Colorado, eastern Wyoming, central Montana, and central western Alberta. In winter it ranges south to southern New Mexico and southern Arizona. It is of casual or accidental occurrence south to La Grulla in the San Pedro Martir Mountains in northern Lower California (May, 1889); and east to Margaret, Manitoba (Sept. 7, 1910, and Oct. 1910); Westhope, N. Dak. (Aug. 29, 1910); Boone, Iowa (Sept. 23, 1894); Milwaukee, Wis. (late autumn, 1875); Louisiana, Mo. (Oct. 12, 1907); and Earl, Ark. (April 1, 1891).

PIÑON JAY

The breeding range of the Piñon Jay (*Cyanocephalus cyanocephalus*) is limited chiefly to the region in western North America in which the piñon pine occurs. This bird is practically resident and breeds north to northern Montana and southern Washington; west to Oregon and California; south to northern Lower California, Arizona, New Mexico, and central western Texas; east to eastern New Mexico, central Colorado, western Nebraska, and eastern Montana. It is also of casual occurrence east to Lawrence, in eastern Kansas (Oct. 23, 1875); and Neligh, in eastern Nebraska (Oct. 28, 1906).

Notes on the Plumage of North American Birds

FIFTY-FIFTH PAPER

By FRANK M. CHAPMAN

(See Frontispiece)

Canada Jay (*Perisoreus canadensis canadensis*, Fig. 1).—In nestling plumage the Canada Jay is almost uniformly dark slate or sooty, without trace of the adult's white forehead or whitish underparts. Even the nostril bristles are sooty. The wings and tail, however, resemble those of the adult, and they are retained at the postjuvinal molt, the rest of the plumage being molted. The new plumage is like that of the adult, and after the completion of the molt young and old birds are essentially alike. There is no spring molt and the slight difference which exists between summer and winter plumage is due to wear and fading.

The Canada Jay ranges from the Atlantic to the Pacific, and in this great area shows some racial or geographic variation, four subspecies of it being currently recognized, as follows:

The true Canada Jay (*P. c. canadensis*) is well shown in our plate. Note that the black of the crown does not extend in front of the eye and that the forehead is white. In the Labrador Jay (*P. c. nigricapillus*) the black of the hindhead reaches in front of the eye. The Newfoundland Jay (*P. c. sanfordi*) is smaller than the Labrador Jay and has the underparts paler. The Alaskan Jay (*P. c. fumifrons*), as its subspecific name indicates, has the forehead usually grayer, more smoky than in the Canada Jay. In the Rocky Mountain Jay (*P. c. capitalis*), the dark forehead area is not much deeper in color than the back and does not reach the eye.

All these are representative forms which presumably intergrade, but from northern California to southern British Columbia a Jay is found which, though closely related to the Canada Jay, is specifically distinct from it. This is the Oregon Jay (*P. obscurus*, Fig. 2), which has the underparts white and the back browner than in the Canada Jay, with the dorsal feathers finely streaked with white. Two subspecies of it have been described.

Piñon Jay (*Cyanocephalus cyanocephalus*, Fig. 3).—The female Piñon Jay averages grayer than the male, but the sexes cannot always be distinguished in color. Nestlings resemble the grayish females. This species is the only member of its genus, and it has no racial representatives.

Clarke's Nutcracker (*Nucifraga columbiana*, Fig. 4).—The sexes are alike and the young on leaving the nest wear a plumage which resembles in color that of their parents, but is somewhat paler below. Only the body plumage is shed at the postjuvinal molt after which young and old are indistinguishable. Like the Piñon Jay this species is the sole representative of its genus, and there are no subspecies.

Notes from Field and Study

Notes from Conway, Massachusetts

To those who wanted to see some of the winter birds, the winter of 1918-19, with its interesting walks and mild days, was a pleasant contrast to the previous winter, with its bitter cold and deep snows.

We were two enthusiastic bird-learners, and we started our longer walks in October. Walking across a pasture on a beautiful October day, our attention was arrested by an odd call-note. We said, in a whisper, "Can that be the Pileated Woodpecker?" We circled about with the caution of hunters, then sat on a bank, perfectly silent. For a long time there was unbroken silence, then we heard the sound of a man chopping wood, but without the metallic ring of the axe. We then caught sight of the Woodpecker doing the hammering. He continued for a short time, but seemed to realize that he was being watched and flew. We sat motionless as statues, and his next short flight brought him near us, but on the opposite side of the tree and entirely out of sight. Soon he flew directly over our heads, with a strong sweep of wing, which took him quite beyond our range for the rest of the afternoon. Our next view of the Pileated was when we were climbing up a steep hill. A fine specimen flew out of the woods and onto a dead tree where we could see the flaming crest to great advantage. This meeting was purely accidental, but later I went back to the first locality in search of the Woodpecker. I caught just one glimpse of it and had to come home unsatisfied. The next time I went, the Woodpecker was seen and we examined many trees which showed the work of the bird.

Victory Day, November 12, 1918, was celebrated by the presence of a beautiful red Pine Grosbeak which uttered its characteristic note while clinging to a twig in the top of a gigantic maple in the quiet of deep woods. This Grosbeak was the precursor of the many that came later. At first there were but four or five of them,

but before the winter was over they appeared in flocks which settled among the weeds or came into dooryards.

The Pine Siskins came next, appearing all too few times. Then came the Evening Grosbeaks. After tramping miles to see them on the 13th, and not finding them, word came over the telephone, in the morning of the 14th, that Evening Grosbeaks were to be seen a mile south of my house. On the way a fluttering was heard and call-notes, and a flock of small birds settled into a tree just at hand. Only for a moment! Then they flitted into the pasture. I went under the wire fence and followed. I found them again, but at a distance they looked like the pods of the milkweed. When I came into range for seeing them distinctly, they flitted away again. As I approached the yard where the Grosbeaks had been earlier in the morning, I saw six golden balls in the tree in the corner of the pasture. I gladly accepted the invitation to enter the house, and then the Pine Grosbeaks began to fly down into the yard. Presently they were joined by the Evening Grosbeaks. Then into the garden flitted the small birds of my upward climb, but still they fluttered at just such a distance as made positive identification impossible, until one flew down near the porch and the sunlight touched My Lady Redpoll's crimson cap and showed the black throat-patch. A little later in the morning we had Pine Grosbeaks, Evening Grosbeaks and Redpolls all feeding together in a mixed flock, with a tendency of the Redpolls to keep themselves separate from the Grosbeaks. The next day I took the same trip and never shall I forget one beauty of a Redpoll that lighted on a branch of a pear tree and showed the pink glow of his breast and the bright crown of his head. The Evening Grosbeaks came close under the window on this day and looked to me like miniature Ducks.

The next week I walked to this locality and beyond it, but while twenty-six Pine Grosbeaks rose into the air, settled into a

tree, and then flew to the woods on the right, not an Evening Grosbeak nor a Redpoll was seen. We walked a mile beyond where we had seen the Grosbeaks, but, finding nothing, turned toward home. When we were passing a cornfield a flock of birds with white wings, bordered with black, rose from it and flew over a large knoll. We skirted the knoll cautiously, expecting to see the birds, but all was quiet. We were about to go back to the road when the birds again rose, circled and lighted. Even now it was difficult to see them, for they seemed to crawl along the ground, taking advantage of every clod of earth, every stump of cornstalk, and, when not in flight, presented a blackish, mottled appearance. We crept nearer and nearer until once more the flock rose higher and higher and in a line slanting to the west. They gradually grew smaller and smaller until they were like specks in the gray clouds, showing how they came to be called 'Snow-flakes.'

In June we were attracted to Sugar Loaf Mountain by the report that the Duck Hawk was nesting there. Going up the mountain, we heard the Ovenbird, the Veery, the Black-throated Blue and the Black-throated Green Warblers. As soon as we reached the top of the mountain we heard the cries of the two adult Duck Hawks and saw them circling about. We were not certain whether the young Duck Hawk, of which reports had reached us, was still in the nest or not, so we walked around the top of the mountain, inadvertently going near the spot where the Duck Hawk nested the year before. We found a Junco's nest on the ground, sheltered by a low growth of bushes. We made our way back to the Mountain House to find out more about the young Duck Hawk. Mr. Fisher, who has charge of the place, kindly offered to guide us to the nest, which was really only a grassy place on a ledge of rock. From this shelf there was a sheer drop of 150 feet. There was a fairly comfortable descent to within a few feet of the young bird, and we viewed him from this point of vantage, while the adult birds circled high and then low, uttering their

peculiar cries. The young bird was weird but innocent looking. He seemed a bit helpless, sitting on such a small shelf of rock with us, whom he deemed foes, in front of him, and that drop of 150 feet back of him. Unable as yet to fly, it was no wonder that at times he added his protest to the quacking of his parents.

I was most impressed by the young Duck Hawk's bill, which was not only powerful and hooked, but *sky-blue* in color. The head was light, with a very broad, dark, V-shaped mark on each side. This V-shaped marking comes to a point in front of a perfectly round eye, which gives the head an odd appearance.

The Duck Hawk's diet is not a common thing, for Mr. Fisher found a leg-ring of the Carrier Pigeon in what serves for a nest. In return, the young Duck Hawk was banded.

The flash of a Tanager in the hemlock on top of the mountain added a note of color to our day. The most delightful part of bird trips is that the pleasure found may be lived again at will. As William Beebe has expressed it for all outdoor people, "I stored a memory—one which I could draw upon at need."—FLORENCE MABEL PEASE, *Conway, Mass.*

U-Boat Methods in Nature

As I carefully made my way through the woods to the shore of the little lake, my mind intent on approaching within camera-shooting distance of some unwary little family of Teal or Mallards, I noticed a female Coot contentedly preening herself in the open water just beyond the rushes. Laying herself flat on the slightly rippling surface of the water, she rolled over and over, lazily stretching legs and wings, a picture of utter contentment.

My eyes, roving across the lake, where spray flashing in the sunlight indicated more busy water-fowl, were quickly brought back to the scene in the foreground when, the Coot with a frightened, guttural 'squawk' raised her wings and noisily pattered up the lake a few rods. The ripples had scarcely started to widen

before the long, sinister body of a Great Northern Diver came to the surface in the exact spot vacated by the Coot. Taking one quick glance around, he immediately dove out of sight.

The Coot was swimming in circles some distance away and showing very clearly signs of nervousness. I brought my glasses to bear on her and was able to note the excited attitude and the sharp turn of her head as she paddled about. Suddenly a geyser-like eruption occurred directly beneath her, and she shot two or three feet into the air, impelled by the force of the blow from the Loon who was darting upward with such momentum that he followed her clear out of the water.

The Coot, plainly distressed, flew haltingly across the open water and into the safety of the flags and marsh grasses on the other side, while the Loon, in much the same sardonic manner as the commanders of some of Germany's U-boats, sat back on his tail in the water, flapping his wings, darting his wicked bill back and forth, and uttering his harsh laughter again and again.—H. J. LADUE, *St. Paul, Minn.*

A Surprised Ruddy Duck

The sense of humor is supposed not to be very strongly developed in birds, but an occasional incident is so ludicrous from the human point of view that we would fain read into the behavior of birds, if not into their facial expression, an appreciation of the situation. On one occasion,—to be exact, June 28, 1917,—the writer, seated on a bank along the sluggish, cat-tail bordered stream that connects Upper Des Lacs Lake with Middle Des Lacs Lake in northwestern North Dakota, was watching the antics of a beautifully plumaged male Ruddy Duck as he admired himself in the water. By and by a Coot, unobserved, sneaked up behind him as if unconscious of his presence. When the Coot had approached to within about two feet, the Ruddy Duck heard a slight splash, and, surprised in the midst of his personal reflections, suddenly started up the creek so excited that he was unable to rise from

the water, but labored along just above the surface, rapidly beating his wings and churning up the water with his feet. Not until he had traveled a hundred yards or more did he as much as cast a glance behind, and when he discovered the unnecessary cause of his fright, he swam sheepishly away into the rushes, while the Coot remained behind in evident enjoyment of his discomfiture.—HARRY C. OBERHOLSER, *Washington, D. C.*

From Near the Arctic Circle

Isolated at this grain station of Uncle Sam's, sixty-five miles from the Arctic Circle, our greatest pleasure is studying the birds and butterflies.

On page 447 of the November-December, 1918, *BIRD-LORE*, is a question about the nesting of Cliff Swallows. Last summer several of them made their nests on our barn, the building being covered with corrugated iron, painted red. The nests were under the eaves and plastered to an unpainted board but ran down onto the red iron. Not one of the nests remained the season out; one by one they fell off, the eggs were all destroyed, and this year there was not a Swallow near that building.

In the March-April, 1918, number, page 183, the letter from Tom McCamant was very interesting, and he may like to know that our experience with the Alaska Robin is that it is tamer than any other bird around here. We have many of the busy little fellows working in our yard and flower-beds and garden every summer, and I should not think of calling them shy. A pair of these good friends of ours built a nest on the ground just outside the fence. I visited them many times, and they followed me around and scolded. Frequently the Robins nest in the various sheds on the place, proceeding with their work in spite of the many busy men coming and going around them. Two years ago one of the young birds got down behind an implement and I was obliged to get it out. The mother bird was present but seemed perfectly calm as I walked around with the little one in my hand, and three times that

day I picked that birdie up, the old bird showing no distress whatever.

The pictures of the White-crowned Sparrows in the May-June, 1919, issue, page 197, are splendid. These little fellows are so numerous around here and so tame that we can walk within four feet of them and talk to them at any time. They seem to be everywhere, and with them is the Rusty Song Sparrow. One of the latter birds walks all over one of our men and eats crumbs from his hand as he eats his lunch by a haystack. Yesterday morning one was found dead in the workshop, having beaten against the window in a frantic effort to get out, and Bob was worried for fear it was his little pet, but at noon he rejoiced when his little friend joined him as usual.

The White-crowned Sparrow is certainly a joy through the summer with its delightful music. Last spring there were nineteen varieties of birds in our fields around the house, but of them all the Alaska Longspur is the king for beauty.

A miner who knew of my interest in the birds of the country reported seeing a flock of Bohemian Waxwings just back of the camp recently, but I have not seen them. Every night our clothes-line is gay with Violet-green Swallows.—MRS. G. W. GASSER, *Rampart, Alaska*.

American Egret in Connecticut

Readers of BIRD-LORE might be interested to know of the appearance in Connecticut this summer of the American Egret. In the latter part of July the caretaker at one of our local reservoirs noticed a large white bird wading around the shores of the reservoir. He interested members of our bird club, and a trip was made there. They were surprised and delighted to find a beautiful specimen of the American Egret. As far as it is known to the writer, this is the first appearance of this bird in Waterbury. It stayed for at least six weeks, and many hundreds of people had the pleasure of seeing this specimen.

The reservoir is new, and the damming

back of the water has created large areas of marsh land. Herons have never been especially common in this vicinity, only three or four of the common varieties ever being reported, and then only in small numbers. This year, for the first time, with the American Egret were seen Great Blue Herons, Night Herons, Little Green Herons and the American Bittern. They stayed for a number of weeks, and we are hoping that a heronry is being established here.—BESSIE L. CRANE, *President of Waterbury Bird Club, Waterbury, Conn.*

Harris's Sparrow at Lawrence, Kans.

I was interested to read, in the May-June number of BIRD-LORE, Mr. Harry Harris's remarks about the peculiar absence of the usual number of Harris's Sparrows in the Kansas City region during this spring's migrations.

It may be worth while to record that here, at Lawrence, Kans., and its vicinity, there was probably a normal passage of this species. This is the first spring that I have spent in Kansas, and therefore I cannot, from personal observation, say in what numbers Harris's Sparrow may usually be expected in this locality, but my notes for this spring, which begin March 30, record many flocks, large and small, of the species in question from that date to May 11, when my last record of a flock of these birds was made. No doubt many were also to be seen after that date, but regular field-trips with my ornithology classes ceased temporarily at that time, and when resumed, several days later, Harris's Sparrow was not again observed.

With exception of May 3 and 7, my observations on the Harris's Sparrow were made daily from April 29 to May 11, and it was during this period that the greatest numbers were seen.—CHARLES E. JOHNSON, *Lawrence, Kans.*

Nuthatch Acrobats

It is an easy matter to tame the Chickadees, as numerous pictures in BIRD-LORE show. The Nuthatch can also be induced

to become friendly with care and plenty of patience, as the enclosed pictures prove. It has taken more than a year to get on intimate terms with this little lady. The latter part of the cold winter of a year ago, I succeeded in getting her to snatch food from my hand a few times. Last summer

nast, without moving a wing or ruffling a feather, while her husband stands over in a nearby tree scolding and perhaps calling me all kinds of names.—GEO. M. MARCKRES, *Sharon, Conn.*



THE ACROBAT



THE GIANT SWING

she nested about 300 feet from my feeding station and came nearly every day for her butternut meats and in July brought her family of four youngsters with her several times. Now she will perch on my hand, take food from my mouth, or do 'stunts' for me on her little grape-vine trapeze, hanging by her toes for nut-meats and pulling up on top again, like an expert gym-

The Scarcity of Golden-crowned Kinglets

Golden-crowned Kinglets were unusually abundant in the autumn and the beginning of December, 1917, in Eastern Massachusetts, but after the advent of the remarkably cold weather of that winter, they practically disappeared from this

region. In my own experience they have been very scarce ever since, and, so far as I can learn, the experience of other observers in eastern Massachusetts has been similar. This has led me to analyze the data of BIRD-LORE'S Christmas Bird Censuses for the last three years, so far as they concern this species, and I present the results as perhaps of some interest to ornithologists. In 1916, out of 149 lists from states east of the Rocky Mountains, there were 64 records of the Golden-crowned Kinglet, with a total of exactly 500 individuals. In 1917, out of 131 lists from the same territory, there were 37 records and 337 individuals. In 1918, however, there were only 19 records out of 123 lists, and the individuals numbered only 76. This shows a marked falling off and seems to indicate widespread destruction of Golden-crowned Kinglets in the severe weather of the preceding winter or from some other cause. There seems to be nothing to show that the destruction was greater in the northern than in the southern part of the bird's winter range or *vice versa*. From the region to the north of the southern boundary of Pennsylvania, the Ohio River, and the southern boundaries of Missouri and Kansas, 275 individuals were reported in 1916, while 225 were reported from the region south of that line. In 1917 the figures for the northern part were 160 and for the southern part 177. In 1918 the birds were evenly divided between the two sections, 38 in the North and 38 in the South. It is of interest to note that of the 177 individuals reported from the South in 1917, 150 were included in one list from Washington, D. C., and 4 in another list from the same city.—FRANCIS H. ALLEN, *West Roxbury, Mass.*

A Brood of Young Robins

I have read with not a little pleasure the interesting letter of Grace L. S. Dyche, in the July-August number of BIRD-LORE, in relation to the nesting of birds, particularly Robins; and while I am unable to add any information from personal experience as to Robins using the same nest a second or

third season—a circumstance which I fancy it would be somewhat difficult to demonstrate—I have at least had the unusual opportunity during the past summer of personally observing a brood of four young Robins at the very instant when they left the nest, and under highly diverting circumstances.

Our summer home is situated on high ground overlooking the sea, about three miles outside of Gloucester, Mass., and when we arrived there, about the middle of June, we discovered that Mr. and Mrs. Robin had already been making domestic history while the sun shone and were actively occupied then in "teaching the young idea" how to get along in the world in a wind-swept section of Cape Ann where the elusive worms do *not* abound.

The nest from which the young Robins had but recently taken their departure had been shrewdly built in a protected angle under the roof of the veranda of our cottage, in plain view of our dining-room, from which the domestic affairs of the little family of visitors might readily be observed. A few days after our arrival we were surprised to see the female Robin on the nest again, and in exactly twelve days there appeared four more eggs, representing a second nesting in the same season by these Robins, a circumstance entirely new and novel to us. In less than a fortnight later, four little Robins made their welcome appearance, and then our own domestic concerns must, of course, be so adjusted as not to disturb or interfere with these charming, if uninvited, guests. Our presence now in the cottage, which had hitherto remained unoccupied, so alarmed the parent birds that, fearing they might in their agitation forsake the youngsters, we decided to close entirely that section of the veranda until the time arrived to "speed the parting guests;" and that is the interesting moment that I am coming to.

One fine morning after breakfast our attention was attracted by an extraordinary commotion among the Robins, the young birds adding their frightened notes to the weird concert, as if by very instinct they realized that the long season of re-

pose and idleness was at an end, and now they must be up and doing. We hurried over to a point from which we could get a full view of the nest and discovered the interesting cause of all the 'fuss and feathers' in our otherwise quiet household. Both of the parent birds were standing beside the nest, and the four little ones were seen to be standing on the edge of the nest, vigorously occupied in limbering up their tender little wings and apparently making ready for the eventful moment of departure for a more ample view of life. The parent birds, observing our presence, took alarm and flew over to the eaves of the adjoining cottage, from which point, in great agitation, they watched the proceedings that ensued directly. When left to themselves, and still standing on the nest, one of the youngsters literally shook itself loose from the others, and, seemingly gauging the distance from the nest to the hard floor of the veranda, took flight and had just strength enough to land on the boards, some fifteen feet below, with a most uncanny look of triumph in its curious eyes, and instantly gave vent to a plaintive appeal for assistance. The parent birds flew over to attack us, but immediately went to the assistance of the brave little fellow on the piazza. The other three refused, under the most interesting promptings of the parents, to budge from the nest, and for several hours more remained standing in their narrow confines, until at last one of the parents flew up to the nest and deliberately began to pick and tear the nest apart, until they were actually forced to follow the lead of the little fellow below. This they succeeded in doing with great difficulty, as the delicate little forms hit the veranda with considerable force, landing them 'on all fours' among the chairs. They were so shaken up that they settled into a corner of the veranda and remained there until the following day, when we had the good fortune to see some of the most fascinating features of the whole proceeding. In the bright sunshine of the next day the little ones emerged from the point where they had rested during the night and commenced hopping about the ver-

anda. At last the parents succeeded in getting them to the edge of the veranda, about ten feet above the ground. At this most interesting moment the scene before us reminded me of those beautiful lines of that purest and gentlest of the poets of Nature—Goldsmith:

"And as a bird each fond endearment
tries
To tempt its new-fledged offspring
to the skies."

So, Mr. and Mrs. Robin, balancing themselves on the wing, fluttered to and fro repeatedly, exerting all their powers of persuasion to induce the fledglings to make the supreme effort. Meanwhile, the offspring moved nervously about on the extreme edge of the veranda, rising and falling on their tender legs, with instinctive fear reflected in every movement. While watching all this sweet "touch of Nature," one by one the youngsters actually leaped into space, their tender wings carrying them about twenty feet away on the grass, where the enraptured parents greeted them with vociferous rejoicing, thereby relieving us of our long, but delightful vigil, and affording us the opportunity to re-open that portion of the veranda which had been reserved exclusively for our feathered friends during the period of a month.—
OLGA MARIE MORGAN, *New York City.*

An Unusual Nesting-Site

The Hermit Thrush, who is not half the hermit its name would imply, is among our commonest birds at Asquam Lake, N. H., and its musical notes may be heard from early in the morning until late at night. Often it chooses to build its nest beside some well-beaten path. Indeed, one courageous mother built her nest and raised her young in a field where the boys of Camp Algonquin played quoits, and although fifty boys knew the whereabouts of her home, she continued to raise her brood. Indeed, perhaps feeling instinctively that she was not to be molested, she would not desert her nest even when the boys were within a foot of her.

But this summer I was permitted to

watch an even more unusual nesting-place. Early in June we noticed a female Hermit placing nesting material on a beam supporting the roof of the piazza of the cottage occupied by Miss Florence DeMeritte. The same site was used formerly by a family of Phœbes. After building here for several days, she changed her mind and began to build a few feet farther along the beam. All the while Miss DeMeritte and her sister used to sing or whistle to the bird, who did not seem to know the meaning of fear. Before the second nest was

finished, the bird seemed to change her mind once more, and deserting her former nesting-sites, she began to build a third nest in the gutter which ran along the eaves of the house. There, over twenty feet above the ground, she raised her family, not fearing the people who watched her at her work.

Of course, I realize that the Hermit does not always build upon the ground, but such a record is unusual and perhaps unique.—ALBERT E. LOWNES, *Providence, R. I.*

THE SEASON

XVI. August 15 to October 15, 1919

BOSTON REGION.—The autumn migration began early. During the last few days of August there was an unusually noticeable appearance of Myrtle Warblers, a rare bird at this time of year. The first Blackpoll Warbler was reported on September 1, promptly on its scheduled date. September was rainy, and during the whole month, after the Barn Swallows and Kingbirds left on September 6, birds were very scarce. A prominent migration of Accipiter Hawks passed southward in the first half of the month, but during the thirty days following September 10, there were almost no birds in this country region, no more than in the dead of a poor bird-winter.

This period in the autumn, sometimes continuing for two or three weeks, when there appears to be a dead calm in the flight of migrants, and often preceded and followed by a time of great activity, may be termed the 'September doldrums.' This year the doldrums were well marked and protracted. They did not terminate until October 12, when Myrtle Warblers in full numbers, accompanied by many Ruby-crowned Kinglets and fewer Yellow Palm and Palm Warblers, made a sudden and general appearance. Yellow-bellied Sapsuckers were present, also, with this flight, in numbers above normal.

This review of the past two months suggests a query as to the explanation of the

double migration of the Myrtle Warbler. In the interval between early September and mid-October there were none here, or practically none—a few came early, many came late. The same division, although less marked, may sometimes be noted in the case of the Blackpoll, when a few birds appear in *August*, two weeks before their steady southward march begins in *September*.—WINSOR M. TYLER, M.D., *Lexington, Mass.*

NEW YORK REGION.—These two months, which cover most of the southward migration hereabouts, were marked by plentiful rain, an unusual prevalence of wind from various points in the east, and scarcity of sharp northwest clear-offs. The most diverse wave of transients probably went through between September 10 and 15. The first few days in October, Blackpoll Warblers, in the greenish, yellowish plumage of fall and young birds, were very numerous, till on the fifth they were as ubiquitous in the trees as those leaves just beginning to let go one by one and eddy downward here and there, and their chips and squeaks sounded on every hand. In the succeeding week their numbers fell off rapidly; each bright morning brought quantities of the more hardy Myrtle Warbler, and Robins for the most part disappeared. A few days later than the Myrtle Warblers

there was a marked wave of Sparrows, the White-throated predominating, a few of the rare White-crowns mixed with them, and the first Fox Sparrow on October 12. October 13, a sparkingly clear northerly morning following a rainy day, the writer had the pleasure of spending two or three hours in the field with Mr. W. L. Sclater, of London. White-throated Sparrows and Myrtle Warblers were perhaps the two most abundant migrants, if one does not count the quantities of Song Sparrows in the outskirts of a swamp, where the Swamp Sparrow was also much in evidence. A few Phœbes and Thrushes had probably come in the night before, and, strangely enough, the only one of the latter definitely identified was an Olive-back, though most likely the others were Hermits. Three Pied-billed Grebes were gone from a pond where they had been present the afternoon before. Two considerable flocks of Pine Siskins were found feeding, one under some birches, the other in weed-tops; a Purple Finch in the streaked plumage of female or young gave a snatch of half-song from high up in a tree; a Goldfinch was still calling the double baby cry and fluttering with its wings.

It is interesting to try and explain unusual dates of occurrence. Such are a couple of Myrtle Warblers, September 14, at Mastic, which is as early as we have record of the species on Long Island. Probably seasons when a given species is particularly abundant there is a greater chance of seeing it very early or very late, and these early Myrtle Warblers are in a sense explained by the considerable flight which came weeks later. This October 12, Garden City, chances as well to be our earliest *previous* Long Island date for the Fox Sparrow. Will there also be a considerable flight of this species later?—J. T. NICHOLS, *New York City*.

PHILADELPHIA REGION.—This region experienced the usual weather conditions prevalent during late summer and early fall. A driving northeast storm occurred on August 13, the wind continuing in that quarter until the 17th, on which date a

flock of ten Common Terns were observed on the Delaware River. These birds are very rarely seen as far up the river as Philadelphia, and their presence was no doubt due entirely to stormy weather.

Several trips to the New Jersey coast were made during August and September, with the view of looking up shore-bird conditions primarily. As a possible basis for future comparisons, the name and approximate numbers of each species observed are here given: Sea Isle City, N. J., August 10—Dowitcher, 3; Least and Semipalmated Sandpipers, 1,000; Knot, 1; Yellow-legs, 20; Sanderling, 100; Black-bellied Plover, 10; Semi-palmated Plover, 30; Piping Plover, 1; Turnstone, 6. Cape May, N. J., August 25—Yellow-legs, 10; Willet, 1; Sanderling, 50; Semipalmated Plover, 10; Piping Plover, 1. Two-Mile Beach, August 29—Least and Semipalmated Sandpipers, 30; Knot, 1; Sanderling, 40; Black-bellied Plover, 18; Semipalmated Plover, 20; Piping Plover, 2; Turnstone, 8. Cape May, N. J., September 4—Dowitcher, 1; Pectoral Sandpiper, 5; Yellow-legs, 50; Sanderling, 40; Semipalmated Plover, 15; Piping Plover, 4. Two-Mile Beach, September 6—Sanderling, 20; Knot, 25; Black-bellied Plover, 2; Semipalmated Plover, 10; Turnstone, 7. Perhaps it is well to add that clear weather prevailed on all these trips. Other birds, deserving mention, noted: Sea Isle City, August 10—Least Tern and Egret. Cape May, August 25—Little Blue Heron; August 26, 6 Loggerhead Shrikes and a Blue-gray Gnatcatcher. At Camden, N. J., September 14, two young Black-billed Cuckoos were found, apparently just out of the nest. One being unable to fly very well, was easily caught. Although Cuckoos are notably late nesters, the foregoing record seems to be pretty near the limit for the successful raising of the young for this species.

The fall migration of Warblers, to all appearances, was well up to normal, and at the time of this writing (October 8) seems to be about over. More common south-bound winter residents observed to date are as follows: Herring Gull, Septem-

ber 20; White-throated Sparrow, September 24; Junco, October 1; Winter Wren, October 4; Brown Creeper, October 3; Golden-crowned Kinglet, October 8.—
JULIAN K. POTTER, *Camden, N. J.*

WASHINGTON REGION.—August and September of 1919 were very satisfactory ornithological months about Washington. Birds were reasonably numerous and their migratory movements about normal. Fair weather of moderate temperature prevailed during most of this period, and, of course, had its influence.

The song period of a number of our summer residents was unusually prolonged, or, rather, was revived in the autumn of this year, as is indicated by the singing of the Wood Thrush on August 15; of the Redstart on August 27; of the Parula Warbler on September 6, 7, and 27; of the Yellow-throated Vireo on August 31 and September 7; of the Song Sparrow on September 13 and 28, and October 5; of the Migrant Shrike, Blue-headed Vireo, and Indigo Bunting, all on October 5.

A remarkably late nest of the Grasshopper Sparrow is also worthy of mention, though it may have been built because of the loss of an earlier brood. It was found by Mr. Francis Harper at Woodridge, D.C., on Sept. 2, 1919, and contained young, several days old.

On September 6, and extending through two or three following days, occurred the first pronounced wave of autumn migration, bringing a large contingent of Warblers and other birds. An additional wave occurred about September 21, which is usual, and many birds, such as Warblers and Thrushes, then thronged the woods. Later on, about the last of September, still another but less-marked movement took place, this bringing with it more winter residents.

As with practically all seasons, however, there were fluctuations in dates of appearance or departure of some species as compared with other years. For example, the Yellow-bellied Sapsucker appeared on September 13, while its average date is October 2, and its very earliest, September

10, 1905. Mr. Francis Harper reported the White-throated Sparrow on September 21 (average date of autumn appearance, October 3); the Ruby-crowned Kinglet on the same date (average, October 2); and the Slate-colored Junco on September 28 (average, October 7). A Philadelphia Vireo found by Dr. A. K. Fisher at Plummer's Island, Md., on Sept. 7, 1919, is the earliest autumn date for the species, the previous record being Sept. 8, 1896.

On the other hand, several birds extended their summer sojourn beyond the usual time, such as the Kingbird, which was noted by Mr. A. Wetmore on September 14, whereas its average date of departure is August 31; and the Acadian Flycatcher, observed September 12, average date of departure, September 8.

The following five species remained later than ever before, the dates in parenthesis indicating their previous latest records: Baltimore Oriole, noted at Woodridge, D. C., by Mr. Francis Harper, Sept. 14, 1919 (Sept. 7, 1918); Orchard Oriole, reported at the same place by the same observer, Sept. 14, 1919 (Sept. 9, 1917); Western Sandpiper, two individuals shot by hunters on the Anacostia River, Sept. 25, 1919 (Sept. 22, 1894); Upland Plover, observed at Plummer's Island, Md., by Mr. A. Wetmore, Sept. 26, 1919 (Sept. 13, 1914); and the Louisiana Water-Thrush, noted at Chain Bridge, D. C., by Miss Marion Pellew on Sept. 30, 1919 (Sept. 20, 1914).

According to Miss Pellew's observations, the Martin roost on Fourth Street, in the Mall, reached its maximum during the first week of August. The number of birds resorting there each evening was 25,000 or 30,000, possibly more, thus indicating that the birds were fully as numerous as last year. Their behavior in this location was, of course, somewhat different from that of last year's roost near the Red Cross building, since they lacked the large number of near-by telegraph wires on which to perch; but otherwise their actions were much the same. On August 3 they changed their nightly abode from the trees on one side of Fourth Street to those on the other,

for what reason was not apparent. About the middle of the month they left this place entirely and chose for their evening gathering some trees in Judiciary Square, several blocks farther north. The last bird was seen this year on September 7, but previous to this time their numbers at the roost had become very greatly depleted. It will be interesting to see for how many future years the Martins will return to gather in this interesting manner in the city of Washington.—HARRY C. OBERHOLSER, *Biological Survey, Washington, D. C.*

MINNEAPOLIS (ITASCA STATE PARK) REGION.—*August 15 to September 1.* The weather at this northern locality was exceptionally warm throughout the present season, nights as well as daytime, and the usual blankets and woolen garments were not needed. After the middle of August the nights became somewhat cooler, but, with the exception of a very light and local frost on one occasion near the end of the month, the customary severe late August frost did not occur.

Shortly after the middle of August the many Great Blue Herons and Black Terns that had bred in the Park left the lakes and were not seen thereafter. By the 20th of the month the tree-tops were alive, every now and then, with the great, mixed fall assemblages of Warblers, Sparrows, Vireos, Flycatchers, Nuthatches, etc., moving leisurely hither and thither, with much sociable conversation among themselves, and drifting, as a whole, steadily southward on their autumnal pilgrimage to milder climes. On August 28, and for two or three days following, large numbers of Night Hawks swooped about over the pine forests, coming from their summer abiding places farther north, for this bird is an uncommon summer resident in the Park. The tireless Red-eyed Vireo and his louder and sweeter-voiced relative of these Canadian wilds, the Blue-headed Vireo, were still singing blithely up to the very last days of the month, and no doubt lent a cheer to the stillness of the earlier fall days by their musical notes. On the evening of August 13 a Whip-poor-will passed through the Park

and stopped long enough in a deep and dark ravine beside the Lodge to proclaim his presence by a few resounding and spring-like call-notes. This came as a surprise, as the voice of this bird is rarely heard here, and there is but one other authentic record for the Park—on May 25, 1917 (J. P. Wentling).

As the fall approached, the Pileated Woodpecker became more and more in evidence, and it was heard or seen daily. A pair had raised a brood this season, as for several seasons past, in a hole in a Norway pine (formerly occupied by a pair of Wood Ducks) directly in front of the cabin, nearest to the main Lodge. The young left the nest shortly before July 1. On the evening of August 29, one of the birds was seen to enter the old nesting-hole and remain for some time, but left before it was entirely dark, and, whether or not it returned, was undetermined. This suggested that they used the nesting-places later as shelters. On July 7 of the present year, Mr. William Kilgore and the writer watched two of these birds for some time at close range (they are not at all shy) and saw one of them, a female, feed the other, a full-grown and beautifully plumaged male larger than herself, by regurgitation exactly in the manner of the Flicker. This big, gaily attired youngster, for so we considered him, sat quietly by while his worn and much-soiled mother labored assiduously on the near-by jack pines to secure the food that must still be pumped forcibly into his maw. It was an entertaining sight and aroused some surprise that this big bird required to be thus fed and was apparently so helpless for such a long time after leaving the nest—for it probably belonged to the brood that left the Lodge-nest, just mentioned, late in June.

It is a pleasure to be able to state that the Ruffed Grouse in the Park shows, this year, a very marked increase in numbers over the scarcity of the last few years. At least twelve or fifteen covies were reported, where two years ago it was rare to flush a single bird. On August 24, a covey consisting of fifteen or sixteen fully grown birds was encountered close by the Lodge, and,

on August 11, Mr. Burton Thayer met with three covies, consisting of five, eleven, and nine birds respectively. From other parts of the state also come reports of the same considerable increase, this fall. The present year terminates a brief closed period for the Ruffed Grouse in Minnesota. Next year will be an open season, followed by a closed season, thus alternating odd and even years as long as the present game law remains in force. With this protection half of the time and the return of rabbits to their normal abundance (after the recent almost complete destruction by disease), it is probable that our forests will again be re-populated to a considerable extent with this finest of all our game-birds. The question of the simultaneous disappearance of the Ruffed Grouse and rabbits, even in protected areas, has been much discussed. The rabbits have always furnished an abundant and easily obtained food-supply for the various predatory mammals and birds, and it is reasonable to conclude that the latter, in the absence of the former, turned to the next most available quarry—the Grouse—especially in the winter, and well nigh exterminated them before the rabbits recovered from the effects of the pestilence. Rabbits are now to be seen frequently where, for several years past, none were encountered.

MINNEAPOLIS AND VICINITY.—*September 1 to October 15.* The fall has been characterized by mild and pleasant weather. The first frost of any consequence occurred on the morning of October 11, when the temperature fell to 25 degrees, and vegetation, untouched up to this time, suffered its first blighting cold.

Various circumstances have conspired to prevent the writer from going afield as much as usual this fall. But, so far as can be learned from others more fortunate in this respect, there has been nothing especially noteworthy, except that the southward movement of Ducks has been greater than for several years past. Last year the numbers were hardly 25 per cent of the year before. The explanation of the present abundance is not quite evident, unless

it may be that the great drought in the western Dakotas has turned the migration eastward and so into Minnesota. On the opening day, Duck-hunters met with unexpected success almost everywhere, and the shooting has continued good ever since. For example, at a small preserve known as the Long Meadow Gun Club, only ten miles from the heart of Minneapolis, 112 Ducks were shot on the first day of the season, while only about 200 were killed at the same place during the whole of last season.

On October 12, a large flight of Wilson's Snipe passed here, and a wet meadow within the city limits, visited by the writer, was full of them. A week later they had largely disappeared. Several Myrtle Warblers were seen on October 12, probably the last of the fall migration, as none was seen in a walk through the same territory a week later.—THOMAS S. ROBERTS, *University of Minnesota, Minneapolis, Minn.*

KANSAS CITY REGION.—Ideal weather conditions have prevailed in this region during late summer and early fall. The year thus far has been as perfect in every respect as an appreciative nature-student could desire. A tremendous rain-storm of twenty-four hour's duration during late August, when the unusual precipitation of six inches was recorded, seems to have had no ill effect on bird-life. Up to the present time (October 15) there has been no frost, and the woods have only begun to faintly suggest autumn.

Three distinct waves of migrating Night-hawks were noted between August 22 and September 11, and so late as September 30 another drift of these birds was seen. Migrating Baltimore Orioles were much in evidence on August 24 and 27, and great numbers passed on September 5. This is a late date for moving bodies of this species, although stragglers are often present until after the middle of the month. The first singing of the Baltimores, following the post-nuptial silence, was heard on August 9. On August 17, Indigo Buntings were still singing.

The usual August records of Arkansas

Kingbirds from Holt County, indicate that this species is a more or less regular migrant through the Missouri River bottoms region of northwest Missouri, though records from all other parts of the state are lacking. These Holt County records must be accepted as they have several times been substantiated by specimens.

Newspaper accounts from central Kansas on August 22, to the effect that great numbers of Mallards (the usual newspaper exaggeration) were moving south, only confirm more trustworthy reports of many family parties of Blue-winged Teal, Shovellers, and Mallards being seen there. A few troops of these Ducks have been seen on the Missouri River in this region, showing that they have nested in the neighborhood.

On August 24 the Blue Grosbeak was at last found in the Missouri bottoms, several miles from the upland farm where the bird has nested during the past two years. A male with a full-grown young was seen, and there is little doubt that the nest was somewhere on the near-by bluff. This bird is fast extending its range north in western Missouri and eastern Kansas. Two locally rare birds noted on the same date were the Yellow-billed Cuckoo and Traill's Flycatcher. Shore-birds were numerous on the mud flats at the mouth of the Blue River, Yellow-legs and Pectoral Sandpipers being in the greatest numbers. On August 27 migrant Robins and Bluebirds were readily distinguishable from the local birds which still had a somewhat shabby appearance. On this date a river fisherman reported several Ospreys, about 20 feeding Great Blue Herons, three flocks of Blue-winged Teal aggregating 40 individuals, and 6 Shovellers, all seen from his cabin. From the same point was observed a feeding flock of over 100 Red-backed Sandpipers on August 30, and 6 Caspian Terns on September 1 (Andrews). On September 12 a flock of 31 Double-crested Cormorants were noted on the Missouri River near the mouth of Little Platte, and the next day in the same neighborhood, over 150 Pelicans were seen

(Guinotte). Bell's, Warbling, and White-eyed Vireos, and a lone Wood Pewee were singing on September 14. Low-flying Sparrows were heard migrating before daylight on the cloudy morning of October 5 and on the 12th the first Tree and Song Sparrows of the season were greeted. Several flocks of large Red-wings, probably *fortis*, were also seen. Two specimens of the Sanderling, taken from a flock of eight on the Missouri River in Jackson County, were sent in on October 12. This species has been seen here very seldom during recent years.

Fall migration has to date been marked by no unusual occurrence, and the current two-month period has developed only the unusual fact of the verification of the extension of the Blue Grosbeak's range.—HARRY HARRIS, *Kansas City, Mo.*

DENVER REGION.—One realizes the value of carefully kept records concerning the movements of birds as they wander about from month to month, when one tries to make a mental picture or estimate of the peculiarities of a given month's occurrences, as compared with the same month a year or two earlier. The contemporaneous incidents of bird-life may at the time seem unusual, yet when carefully compared with records of the past, may show little or no differences; hence, the writer has taken especial pains to compare the events of the period now under notice with similar periods in the past.

On August 16, the first somewhat unusual bird, for that date, to come under observation in this region was the Slender-billed Nuthatch; the earliest previous record for the same neighborhood was August 28, nine years ago. This species has been noted on four other occasions in the city since August 16, making the writer feel that it has been here rather earlier than ordinary. Once more it has been shown by this season's notes that birds will cling to cities, even remaining well within the heart of the city if they can but get food. The Plumbeous Vireo and the Long-tailed Chickadee were seen

downtown within a few blocks of the post office—the former on September 10, and the latter on October 13.

One unexpected pleasure experienced during the past two months was the reappearance of Cedar Waxwings within the city limits. This species is even more irregular in its wanderings in Colorado than it was years ago in western New York. It is now thirteen years since the writer has seen a Cedar Waxwing in Denver or in its immediate vicinity. These recent visitors were first seen in Washington Park by Mrs. L. K. Robinson, on September 29, when they were busy feeding on berries (Mountain ash, etc.). These Waxwings have since been noticed in the same park on several different days, and once also in Cheesman Park. The Waxwings had a rather difficult time getting the berries as the greedy Robins kept them on the move all the time.

Further evidence of the plainsward extension of Lewis's Woodpecker was secured during this period by the occurrence of one on the Platte River nearly twenty miles northeast of Denver. As time goes on it will probably be found farther and farther away from the mountains along the Platte and similar wooded streams.

The Crossbill is as an erratic a wanderer in Colorado as elsewhere. Nevertheless, it has continued to be a surprise to encounter this species in Denver several times since August 15 and to see five of them in Cheesman Park on October 15. The earliest previous date on which this bird has been seen in Denver by the writer is November 18, though it is not infrequent at any time of the year in the neighboring foothills wherever there are cone-bearing trees, as, for example, on Lookout

Mountain or in the neighborhood of Sedalia.

The last Bullock's Oriole was seen (in this region) on August 18. This Oriole commonly disappears from the Denver region during the last week of August, but it has been recorded by the writer as staying in Denver as late as September 24. Hence, one is justified in believing that this species left this area quite a little earlier than usual.

The most common time for the Tree Sparrow to reappear in this neighborhood is during the first week in November. This year several were discovered in Washington Park on October 3, in company with Brewer's and Clay-colored Sparrows, a decidedly representative assemblage of the genus *Spizella*.

For a long time the writer has had the belief that the various Longspurs, known to have been not uncommon hereabouts in the past, had left the country for good, for it was only at long intervals that one would be detected. It is a pleasure to record that more Chestnut-collared Longspurs have been seen about Denver during the past two months than during the whole of the past two years put together. Let it be hoped that this means that this interesting bird is again increasing locally, or is returning to its old haunts.

It appears, on comparing records, that the present period's bird incidents and wanderings, as shown by many species not mentioned above, show little or no departure from the normal, except, perhaps, that the Long-crested Jay arrived from the mountains about a week ahead of time, and that there was an unusually large wave of Audubon's Warblers passing through this region about September 28.—W. H. BERGTOLD, *Denver, Colo.*



Book News and Reviews

LIFE HISTORIES OF NORTH AMERICAN DIVING BIRDS. By ARTHUR CLEVELAND BENT. United States National Museum, Bulletin 107, Washington, D. C., 1919. 8vo, 239 pages, 43 half-tone and 12 color plates.

In 1910 Mr. Bent undertook to continue the work on the life-histories of North American birds so ably begun by Maj. Charles E. Bendire, and cut short a number of years previous by that author's death. This is the first of a series of volumes in preparation. Grouping together the diving birds, Grebes, Loons, and Auks, to follow the present edition of the A. O. U. Check-list, generally admitted to be unsatisfactory as regards structure or true relationship, is a convenient classification when life-histories are dealt with. After a few introductory remarks where these seem desirable, the life-history of each species is written in substantially the following scheme: Spring migration, courtship, nesting habits, eggs, young, sequence of plumages to maturity, seasonal molts, feeding habits, flight, swimming and diving habits, vocal powers, behavior, enemies, fall migration, and winter habits. A final paragraph, and a very valuable one, gives actual range of dates for eggs, and, where a number of such are available, the narrower range where most of them fall. The half-tone plates comprise a frontispiece of the egg of the Great Auk and illustrations mostly of nests and eggs, breeding birds, young and nesting-sites. The color plates illustrate the egg of each species and in some cases more than one egg to show variation.

The preparation of such a work has necessitated going over a vast amount of literature. The author has had able assistance in mechanical detail, in the investigation of the less-known species, and in contributions from other observers concerning species with which they are particularly familiar or have made an especial study of, for which due credit is given. But the excellence of the volume

seems to be primarily due to his indefatigable industry in field and study, and to his detailed and comprehensive knowledge of North American birds, which make it unquestionably one of the most important recent contributions to North American ornithology.

It is customary in textbooks on ornithology, after technical descriptions and measurements and statements as to range and migration, to give a short biographical sketch or pen-picture of each species in life. This aids the student in the identification of the living bird and helps him to place it in the scheme of nature when he has met it perhaps for the first time in the field. For such biographical material it is surprising how frequently one has to go back to early writers. How far special investigation along certain lines has outstripped a general knowledge! If the succeeding volumes of Mr. Bent's work are equal to the first one, we shall have a thoroughly up-to-date treatise to refer to in these matters.

The text is full of apt quotations regarding life-histories from a great many sources, but is in no sense a compilation of what is known of the birds' habits—rather a picture graphically setting forth the place of each species in nature. There is much original matter and a good deal of the text has literary merit. It is to be regretted that the color plates of eggs have not been made more attractive in a work which will have so wide a popular appeal. A bird's egg is *per se* a very beautiful thing, but the sickly yellowish background of the plates, which may be a good one to bring out color-values, spoils the pleasure of looking at them, and the eggs themselves appear flat. The paragraphs on range and migration have been prepared with a great deal of care and give a more concise statement of summer and winter ranges of each species and its general movements to and from than can be found elsewhere. In many cases there is

very interesting discussion of relationships and throughout valuable matter on plumage changes. Little-known, far northern forms have been the subject of special investigation, and the author has taken pains to gather first-hand information concerning them from others.

The work will perhaps serve, primarily, as a textbook of nests and eggs and of general habits, as opposed to the more comprehensive and detailed study of particular habits which will likely be made in the future. We think of it as rounding out an epoch in the science of ornithology and making the same more firm as a basis for future research, and are pleased that the tone is conventional throughout as in the use of the possessive case in such names as Brünnich's Murre. Most students will know some things about the diving birds not set forth in these life-histories, from which, for instance, one could scarcely gather that the Dovekie and the Red-throated Loon are more pelagic on their winter grounds than the Common Loon, but every student will find here a book well worth referring to.—J. T. N.

HABITS AND ECONOMIC RELATIONS OF THE GUANO BIRDS OF PERU. By ROBERT E. COKER, in Chicago Scientific Inquiry, United States Bureau of Fisheries. Proc. U. S. Nat. Mus., 56, 1919, pages 449-511, plates 55-69.

From December, 1906, to August, 1908, the author of this paper conducted an economic study of the guano and fishery industries of Peru for the Peruvian government. The more purely economic results of his labors were published some years ago, and we have here a report upon the habits of the birds, observed with more especial reference to the part they play as producers of the vast deposits of guano which have proved so important a source of revenue to the Peruvian government. In letters written to BIRD-LORE while cruising down the coast of Peru, the writer of this review has mentioned the fundamental factors underlying the formation of these guano deposits. Briefly, they are birds, fish, islands, and absence of rain. Mr. Coker here fills in the details of the

picture by observations made on nearly every bird-inhabited island on the coast of Peru. He describes the general features of the coast, the part played by the cold Humboldt current in affecting the climate as well as the fauna, and treats at length of the status and habits of the various birds which came under his observation.

We are, for example, accustomed to think of the Penguin as restricted to the Antarctic region, but the low average temperature (about 62° Fahr.) of the waters off the coast of Peru causes, as it were, an arm of the Antarctic to stretch northward along the west coast of North America, and as a result we actually find Penguins (*Spheniscus humboldti*) nesting within eight degrees of the Equator.

The principal guano-producing birds are Cormorants, Pelicans, and Gannets. In a preceding issue of BIRD-LORE (March-April, 1919) we reproduced a photograph by Mr. Coker, showing acres of Chilean Brown Pelicans (*Pelecanus thagus*) on the island of Lobos Afuera, and through his courtesy we here present an even more astounding picture of Cormorants (*Phalacrocorax bougainvillei*) taken on South Chincha Island, June 15, 1907. This species, the 'Guanay' of the natives, is economically the most important of the guano birds. It inhabits chiefly the Chincha Islands from which, between 1850 and 1872, there were removed nearly 11,000,000 tons of guano, having a value of about three-quarters of a billion dollars.

The photograph which we here reproduce shows a colony of Guanays which Mr. Coker estimated to contain about 360,000 adult birds, with about an equal number of young, or over 700,000 individuals. A month later the colony was believed to have increased 50 per cent. While the original supply of guano was long ago exhausted, the annual deposit is so large that it forms an important source of revenue, but the eagerness of concessionaires to remove it so disturbed the birds that islands which they had occupied for years were deserted and the guano industry was thereby imperiled. It was one of the objects of Mr. Coker's studies



GUANAYS (CORMORANTS, *Phalacrocorax bougainvillei*) AT NESTING-GROUND, SOUTH CHINCHA ISLAND, JUNE 15, 1907
Photographed by R. E. Coker

to formulate methods of operation on the part of the guano collectors which would prevent this catastrophe.

It is an eloquent comment on the ways of what we are pleased to term civilized man, that the procedures recommended by Mr. Coker, while less severe, were, in effect, those adopted by the Inca before the Conquest! Quoting from an early author, Mr. Coker writes: "In the time of the Inca Kings, such vigilance in guarding the birds was maintained that, at the time of breeding, it was forbidden to anyone to enter on those islands under penalty of death, in order that they might not disturb them nor drive them from their nests. Neither was it permitted to kill them at any time, within or without the islands, under like penalty." Here, surely, we have one of the earliest as well as one of the most drastic of bird laws.

Mr. Coker's paper abounds in further interesting observations. He has made a contribution of the first importance to our knowledge of the bird-life of what we believe is, ornithologically, one of the most interesting regions in the world.—F. M. C.

WATER BIRDS OF MINNESOTA; PAST AND PRESENT. By THOMAS S. ROBERTS, M. D., Curator Zoölogical Museum, University of Minnesota. Biennial Report State Game and Fish Commission of Minnesota, for the Biennial Period Ending July 31, 1918, Minneapolis, Minn., 1919. Pages 56-91; numerous photographs.

Dr. Roberts deals with the 'Past' of his subject in the following impressive sketch of the bird-life of Minnesota as it existed when white men first saw it:

"When the region that is now included within the boundaries of the state of Minnesota was first invaded by white men, the wild-life conditions were vastly different from those that exist at the present time. The earlier explorers found great herds of buffalo and elk grazing along the bluffs of the Mississippi River, deer filled the woodlands, beaver abounded in all the streams and lakes, and the primeval forests of the north sheltered great numbers of moose, caribou, black bear and other mammals that are now little more than a

tradition. The diversified and fertile uplands and the equally varied and bountiful waters supported a bird population that astonished and tested the descriptive powers of the early narrators. Ducks of many species bred in vast numbers and rose in dense clouds before the voyageurs' canoes. The honk of the Canada Goose resounded far and wide throughout the summer months, and legions of Wavies, Speckle-bellies, and Blue Geese passed to and fro spring and fall. The prairies in the nesting season were alive with Upland Plover, great Sickle-billed Curlews, Willets, the beautiful Avocet and countless thousands of great, noisy Marbled Godwits; while as migrants came an innumerable host of other shore-birds, conspicuous among which were great flocks of Golden and Black-bellied Plovers and Eskimo Curlews. About the margins of the many shallow lakes, majestic Trumpeter Swans reared their young, and big flocks of Whistling Swans settled on the open waters to rest and feed on their long flights to and from the far Northland. Great, snow-white Whooping Cranes, and thousands of the more sombre-hued Sandhill Cranes, built their huge nests in the marshes, paraded and danced in stately fashion on the prairie upland or trumpeted loudly from on high. Vast flocks of Passenger Pigeons obscured the sun and filled the woodlands with their noisy roostings and their eager scramble for the fallen acorns.

"If reports are true, the whistle of the Bob-white was a rare sound in those early days, but the Sharp-tailed or White-breasted Grouse—the Prairie Chicken of all this region at that time—abounded in the open country and the 'drumming' of the Ruffed Grouse echoed everywhere through the woodlands. The 'booming' of the Pinnated Grouse came later, with the advent of the settlers' grainfields, and followed the Sharp-tails as they retreated westward and northward before the advancing harvest that lured the Prairie Hen from its original home on the great prairies of the Middle States.

"Hawks and Owls, Eagles and Vultures

were then far more abundant than now and performed unmolested the rôle for which they were created, of maintaining the natural balance and well-being of the animal hosts among which they lived."

This is followed by a detailed consideration of the status of the water-fowl which are now found in Minnesota. Dr. Roberts here gives us much information concerning their habits and numerical abundance, and his paper therefore has both ornithological and historical value.—F. M. C.

THE BIRDS OF NORTH AND MIDDLE AMERICA. By ROBERT RIDGWAY. Part VIII. Jacanas, Thick knees, Oyster-catchers, Turnstones, Surf Birds, Plovers, Snipes, Phalaropes, Avocets and Stilts, Skimmers, Terns, Gulls, Skuas, Auks. Washington Government Printing Office, 1919. 8vo, xv+852 pages, 34 plates.

We can accord the eighth volume of this great work no higher praise than to say it reaches the standard of the seven that have preceded it. From the preface we learn that 651 genera, 2,507 species and subspecies of the birds of Middle and North America have been fully treated in these eight volumes, and, in addition, the principal characters have been given of 213 extralimital genera and 602 extralimital species. Surely Professor Baird would be gratified beyond measure had he lived to see the admirable form which his plan for a work on the birds of the region in question has taken.—F. M. C.

GOLDEN DICKY. THE STORY OF A CANARY AND HIS FRIENDS. By MARSHALL SAUNDERS. Frederick A. Stokes Co. New York City. 12mo, xi+280 pages, colored frontispiece.

The author of 'Beautiful Joe' here makes a Canary her hero and gives us his biography. The book is designed to arouse in children a sympathetic understanding of both birds and animals, and we believe with the author of the introduction that "the children who read these delightful pages will surely form lasting friendships with Dicky-Dick, the cheery songster, and Chummy, the stout-hearted little Sparrow, and all the Robins and Grackles and Crows, who, with the dogs and squir-

rels and Nella, the monkey, make up the lively company embraced in these chronicles."—F. M. C.

BIRDS OF NORTH CAROLINA. By T. GILBERT PEARSON, C. S. BRIMLEY, and H. H. BRIMLEY. Vol. IV, North Carolina Geological and Economic Survey. Raleigh, 1919. Royal 8vo, xxiii+380 pages, 24 full-page color plates, 10 photographs, 275 text-figures, 1 map.

The authors of this work have devoted many years of study to the birds of North Carolina. Mr. Pearson, during his college days at Chapel Hill and, later, as Secretary of the State Audubon Society, had wide opportunity to familiarize himself with the bird-life of the region over which this Society had jurisdiction, while the names of the Brimley brothers have been associated with North Carolina ornithology almost for a generation. Many other sources of information have been drawn on, including the records of the Biological Survey and the observations of fellow ornithologists.

There are Keys to Orders, Families, Genera, and Species, and descriptions of the latter, the whole, combined with the large number of illustrations, being well designed to make identification largely a matter of correct and definite observation on the part of the student.

The annotations under each species relate chiefly to its status and manner of occurrence in North Carolina, with data on the breeding species concerning dates, nest-site, and color of the eggs. There are brief comments on general habits, but, as a rule, no descriptions of songs.

The large number and, with some exceptions, excellence of the illustrations, adds greatly to the value and attractiveness of this volume, though we nowhere find mention of the illustrators. All but one of the full-page color plates are signed by R. Bruce Horsfall. They vary much in character, that of the Wild Geese, for example, being as good as the one figuring the White-throated and Fox Sparrows is poor.

The 275 text-figures are wash-drawings usually of the head and anterior parts of

the body, but not infrequently of the whole bird. They are unsigned, but we are informed were made by Mr. R. Brasher. They, too, vary in character, the Owls being far below the standard which many of the others reach, but their large size (many are life-size, though no scale is given) and the clearness with which they are printed make them most acceptable to the student. The senior author supplies an historical introduction, Mr. C. S. Brimley a chapter on life-zones, and the Brimley brothers, with C. S. Bruner, give a useful table of bird-migration at Raleigh based on thirty years' observation. There is a bibliography, a glossary, and two indices.

The state of North Carolina is to be congratulated for taking the lead among the southern states in the production of a work on birds which is a credit to the Commonwealth as well as to its authors.—F. M. C.

OUR WINTER BIRDS, HOW TO KNOW AND HOW TO ATTRACT THEM. By FRANK M. CHAPMAN, Curator of Birds in the American Museum of Natural History. 12mo, 180 pages, 2 color plates (inside of cover), 8 full-page and 18 illustrations in text. D. Appleton & Company, 1919.

This will serve as a textbook for those who begin bird-study in winter, the time of year when our bird-population will be found at its simplest terms, and also contains such information as is desired by the increasing number of persons who find pleasure in having birds about their homes during the bleaker months. To quote from the introduction: "I look from my window over the white expanse of snow. The sky is gray; the shutters creak fretfully in the wind . . . The world seems dead, when a feathered mite flits through the air, perches on a nearby limb and calls a merry *Chick-a-dee-dee-dee*. What a difference in the scene his coming makes!"

Following general introductory matter, the text is divided into three parts, Home Birds, Field Birds, and Forest Birds, with short chapters under each, giving character and habit sketches of the different species.

Whereas the book is designed to be of the greatest service to beginners, be they children or grown-ups, the birds' place in nature and value to man, dwelt on throughout, should interest more advanced students. The full-page illustrations are of representative species, a short description at the foot of the page supplying size and color. The two color plates on the inside of back and front cover are a novel feature, with certain obvious advantages. Here we find 63 individuals of 42 species represented, as though mounted specimens on the shelves of a museum. The figures are small, but the details and color sharp and clear. The birds are all to scale, so one sees comparative size at a glance and can compare two species which resemble one another without turning the page.

The book is of convenient pocket-size, and will serve as an introduction to winter bird-life for those who enjoy a tramp afield at that season.—J. T. N.

BIRD OBSERVATIONS NEAR CHICAGO. By ELLEN DRUMMOND FARWELL. Introduction by MARY DRUMMOND. With illustrations. Privately printed. 12mo, 192 pages, 10 photographs.

These posthumously printed observations from Mrs. Farwell's journals were not written for publication, but they well deserve it. Keenly sensitive to the personality of birds and to the charm of their songs, Mrs. Farwell evidently also possessed the scientific spirit which prompted her to record at once, and at length, her impressions of a bird's appearance and notes. The result is an actual contribution to the literature of ornithology, marked by a freshness, originality, and independence of observation which make these attractively printed pages of especial value to the beginner, who will find real assistance in Mrs. Farwell's descriptions and comparisons.—F. M. C.

The Ornithological Magazines

THE AUK.—The October number contains faunal papers dealing with birds of Stanstead County, Quebec, 1918, by H. Mousley; the Chicago area by C. W. G.

Eifrig, and southwestern France by Thomas D. Burleigh. Fred H. Kennard describes a race of the Blue-winged Teal breeding in Louisiana, the adult drake with white patch on the nape, illustrated in a half-tone plate of heads by Fuertes. Charles B. Cory describes a new species and two new subspecies of South American birds; Charles W. Richmond writes of a scarce old volume on African birds of interest to numerous modern students of bird names, and there are also technical systematic papers by Penard and Oberholser. Loomis publishes a photograph of two Shearwater skins which he would have us believe color phases of a single species. Jonathan Dwight, "steering a middle course between the Scylla of imperfect knowledge on the one hand, and the Charybdis of nomenclature on the other," takes up the question of the relationship and correct names for the Lesser Black-backed Gulls, Eurasian forms; and N. Hollister writes of the relationship of the Ring-necked to other allied Ducks of the world.

The above matter is, perhaps, too technical to interest most of BIRD-LORE'S readers. For those who have a turn of mind to biography there is 'Jacob Post Giraud, Jr., and His Works,' by Witmer Stone. Giraud died in 1870. His 'Birds of Long Island,' published in 1844, was the best piece of local ornithological work that had appeared up to that time and gives us a reliable picture of water-bird life in early times. Giraud was a personal friend of George N. Lawrence and probably had a considerable influence on the career of that younger, better-known naturalist.

Variation in the nesting habits of a bird in different parts of its range is of much interest, and in this connection we have a description of finding the nest and eggs of the southern race of the Black-throated Green Warbler at Mt. Pleasant, S. C., by Arthur T. Wayne. A breeding colony of Great Blue Herons at Lake Cormorant, Minn., is described in detail by Horace

Gunthorp, and we are pleased to learn that "it is located where it will in all probability be protected in years to come and thus it will be possible to record the future growth of the colony accurately, and so we shall be able to form some estimate of the status of the Great Blue Heron in Minnesota and the Northwest."

Aretas A. Saunders graphically describes a constant difference in song he has found between Ruby-crowned Kinglets in the Rocky Mountain region and those farther east, with accompanying remarks on the variation of bird-song, etc. As is the case in earlier studies of bird habits by the same author, Mr. Saunders' remarks are unusually clear and convincing. 'The Evolution of Bird-Song' is discussed by Francis H. Allen in a very interesting manner, showing of what wide philosophic interest is the field offered by a study of bird-voices.

The General Notes contain more than the usual variety,—systematic matter, rare records, etc. The 'Occurrence of the Cerulean Warbler in the Catskills,' probably breeding (S. H. Chubb), catches our eye, as also a southern Massachusetts breeding record for the Myrtle Warbler, and the surprisingly early arrival of the Tree Swallow for a period of years at Plymouth, Mass., as opposed to its later appearance in other localities (J. A. Farley). Notes from various observers from different parts of the country show that there was a *spring*(!) flight of the Evening Grosbeak in 1919; localities are in Massachusetts, New York, New Jersey, Ohio.

Taking this October number as a whole, we are struck with the amount of matter it contains relative to foreign as opposed to North American birds. This may be merely chance, a matter of no significance, but we suspect that it is indicative of a real tendency in bird-study, and that American bird students will in the future let their interests stray further afield.—J. T. M.

Bird-Lore

A Bi-Monthly Magazine

Devoted to the Study and Protection of Birds
OFFICIAL ORGAN OF THE AUDUBON SOCIETIES

Edited by FRANK M. CHAPMAN

Contributing Editor, MABEL OSGOOD WRIGHT

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Bird-Lore's Motto:

A Bird in the Bush Is Worth Two in the Hand

Over two hundred colleagues and friends of the late William Brewster have presented the sum of \$5,000 to the American Ornithologists' Union, as Trustee. This fund will be known as the William Brewster Memorial and not oftener than every two years the Council of the Union, acting as judge, will award the interest on it in the form of a medal and an honorarium to the author of what, in their opinion, is the most important contribution to the ornithology of the Western Hemisphere during the period named.

The donors of this gift have not only paid a well-deserved tribute to the memory of William Brewster, but they have rendered an important service to the science to which he devoted his life.

Other representative scientific bodies in this country, the National Academy of Sciences, for example, have long been in a position to acknowledge suitably noteworthy work in their various fields, but the American Ornithologists' Union has not been able to recognize meritorious achievement in its department of science. The Brewster Memorial has now happily made this possible.

In this connection it is fitting to add that through provisions of Mr. Brewster's will, the Union, the Nuttall Club, the Charleston, S. C. Museum, and the Massachusetts Audubon Society will in due time each receive \$2,000, while the Museum of Comparative Zoölogy at Cambridge will receive his collection of birds and the sum of \$60,000.

TO GAIN some conception of the effects of the destructive forces which have been continuously at work since the discovery of this country, one should read the extract from Dr. Roberts' paper on the water-birds of Minnesota which we print in a review of that publication on a preceding page of this issue of BIRD-LORE. We can never hope to restore these primeval conditions, but we should never cease to be thankful that the efforts of bird-lovers, exerted chiefly through the Audubon Society, have been effective in checking the hand of the destroyer. Under federal protection, based upon sound principles of science and conservation, and with a full recognition of our duty to posterity, we may be assured that, as far as present circumstances permit, our migratory waterfowl will have a square deal.

It is greatly to be regretted that in giving permission to the owners and employees of fish hatcheries to kill Grebes, Loons, Gulls, Terns, Mergansers, American Bitterns, Great Blue Herons, Little Blue Herons, Green Herons and Black-crowned Night Herons at any time in hatchery grounds, or waters, the Department of Agriculture did not require hatchery owners to secure a permit before allowing them to destroy the birds in question. The regulation, as it stands, opens the door unnecessarily wide to wanton and illegal shooting by persons who will interpret its provisions to suit their own ends.

WITH this number BIRD-LORE completes the first year of its majority. With other serial publications it has been obliged to meet war and post-war conditions which have increased the cost of production and distribution from 50 to 100 per cent, but the magazine enters full-fledged manhood, sound in wind and limb, and more than ever eager to advance the cause for which it stands.

There was an unavoidable delay in securing paper for the September-October number, but thanks to the loyalty of the Mt. Pleasant Press we have been spared the trials which have forced scores of our contemporaries to suspend publication.

The Audubon Societies

SCHOOL DEPARTMENT

Edited by A. A. ALLEN, Ph.D.

Address all communications relative to the work of this department to the Editor, Cornell University, Ithaca, N. Y.

CHRISTMAS WITH THE BIRDS

This is the season when kind thoughts abound and everyone is endeavoring to express his friendship and good-will to his fellowman. It is not only because the stores are in gala dress and are advising us to shop early; it is not only because of the holly and mistletoe for sale on the street corners, nor yet because of the merry Santa Clauses with their red cardboard chimneys soliciting funds that we know the holiday season is approaching. The spirit of joyous giving is in the air and we wish to do our part. But let us not confine our Christmas thoughts to man alone. Why is not this the season of the year to bring all nature into the family to share our abundance? It is a most appropriate time to inculcate into the minds of the children a love of birds and all animals, and a desire to befriend them. It is now that birds are quick to respond to help, for they need it when most of their food is covered with snow and ice. Now is the time to feed them and to attract them about the windows, for Christmas is not complete without them. We have borrowed from our European cousins the holly and the mistletoe, Santa Claus and the Christmas tree. Let us add the Chickadee, the Nuthatch, and the Snowbird as emblems of our American Christmas.

Those who have been following the pages of BIRD-LORE during the past few years have become aware of the extent of the movement for feeding the winter birds. Only those who have been actively engaged in the work, however, appreciate the pleasure and profit to be gained by so doing. It seems that nothing new could be said on the subject, and that repetition of what has been written might be useless, but a subject so fundamental to the whole conservation movement can scarcely be overemphasized. In our teaching of children, and adults as well, for that matter, we know that our words are of little avail until our listeners put into actual practice the principles we have endeavored to inculcate. When the principles are dry and uninteresting or difficult to grasp, they usually go in one ear and out the other, but when they are applicable to daily life and can be put into immediate practice, they usually bring quick results. When anyone has done by himself one bit of service for the conservation of wild life, one little act of kindness for birds or animals, *and by so doing has drawn a response from the animal befriended*, his interest is fixed for the rest of his life. When a teacher stimulates a child to perform some such act, he has accomplished more for the conservation movement than he could by any

number of set exercises. It is for this reason that the editor wishes to emphasize once more the feeding of the winter birds, for it provides an opportunity for each child to do something by himself that is almost certain to draw a response from the birds, and this is the surest method of fixing his interest. There never was a boy so 'bad' that he would stone or shoot the birds that come to the feeding-station which he has made with his own hands. Rather will he be proud to protect them from all other boys, and with this feeling in his heart, it is only a step to his protection of all birds.

Many teachers have told me that they would like to attract the winter birds, but owing to the situation of their schools in crowded cities or unfavorable districts, they felt sure that they would have no success. My answer is that there is not a school in the world, or a home, that birds will not find when food is put out for them. Of course, the schools in the larger cities should not expect the great variety of birds that the rural schools enjoy, but even though nothing but House Sparrows and Pigeons put in an appearance, the same lessons can be taught, the same pleasure derived. In such places one studies the individual birds rather than the different species and by careful observation learns to recognize each Sparrow and each Pigeon by little differences of plumage or slight differences of manner. The children can give names to the different individuals if they wish, for by so doing they will sharpen their observation.

It may seem strange to advise attracting the House Sparrows in one breath and to recommend an 'anti-Sparrow' shelf in the next, but it is quite possible to teach children the greater value of our native birds without destroying their reverence for life, even the life of a House Sparrow. If it is impossible to attract native birds because of the large flocks of House Sparrows that annoy them and drive them from the feed, it is better to teach the children to outwit the Sparrows than to destroy them.

HOW TO ATTRACT BIRDS

In many places where the birds have been fed for years and have learned to hunt about windows and doorsteps, they find food wherever it is put out for them in a very short time. In other places where winter feeding has not been practised, the birds have to be taught to come to windows, and it may be some time before they find the food. These directions are intended primarily for teachers who live where winter feeding has not become the custom that it has in localities where there is much local interest in birds.

WHAT FOOD TO USE

To begin with, the birds which ordinarily come to feeding stations fall into two groups: those that feed normally upon insects and those that feed normally upon seeds. The insectivorous birds include the Woodpeckers, Nuthatches, Chickadees, Kinglets, Creepers, and Jays. These birds, in addition to feeding

upon insects, feed during the winter upon all fatty substances, and it is for this reason that it is easy to supply them with food. Beef suet, meat scraps, all kinds of nuts, raw peanuts, sunflower seed, pancakes, and doughnuts seem to contain the necessary substances and are much relished by them. The granivorous birds found in northern United States during winter are mostly members of the Sparrow family, and those that come most commonly to window feeding-stations are the Juncos, Tree Sparrows, Song Sparrows, Purple Finches, and Grosbeaks. All kinds of seeds are suitable for them, and, when nothing else is available, cracked grain, commonly called 'chick-feed,' is the most convenient and the cheapest. Weed seed collected by the children, sweepings from the barn floor, screenings from the mill, and the crumbs from the children's lunches are all equally satisfactory.



BROWN CREEPER AT THE SUET-LOG

The wire screen protects the suet from Crows and squirrels which might carry it away in one or two visits

WHEN TO BEGIN

If you have not already begun feeding the winter birds when you read these lines, begin now. The best time to begin, however, is in the fall before the birds have formed the fixed habits which later on take them over approximately the same course every day. Early in the season they learn which trees are infested with insects and which ones are barren of food and ordinarily they fly from one to the next, skipping the barren trees. If one happens to select trees barren of insect life for the suet, the birds may not find it for a long time. On the other hand if one watches the birds before placing the suet and selects trees through which they regularly pass, it makes little difference how late in the season he begins.

HOW TO BEGIN

The best way to begin is to select the window or spot in the yard where one wishes the birds to come and, from this as a center, as nearly as possible in the four directions, fasten pieces of suet in the branches of the trees to a distance of several hundred feet. If a bird comes anywhere in the vicinity it is then apt to find one of these pieces of suet and will sooner or later find its way to the desired

spot. When one bird has found the suet at the window, it will not be necessary to keep up the supply in the other places, for birds are continually watching each other as well as hunting for food and are quick to follow the one that has found a good feeding place. In the beginning it will be most satisfactory to tie the suet to the most conspicuous branches available, but at a permanent feeding station, likely to be visited by Crows and squirrels that will try to carry off all the suet in one piece, it is best to put it behind a piece of wire netting or to ram it into a hole bored in a tree or a post erected for that purpose.

If there are weed patches or shrubbery near, where the seed-eating birds regularly feed, one should encourage them to return to that place by scattering more seed, but if there are none, as is often the case, one can rely upon the Chickadees and Nuthatches and House Sparrows to show them the way, and can begin by putting seed directly on his feeding-shelf. There is scarcely any locality where flocks of House Sparrows will not almost immediately find the seed and consume it about as fast as put out. One should not be discouraged, however, for they ordinarily act as decoys and by their chirping announce to the passing native birds the presence of the food. After the native birds have found the food, it is time to outwit the Sparrows with anti-Sparrow devices.

THE PERMANENT FEEDING STATION

The type of permanent feeding station to be used must be determined by local conditions. If there is a window available, with a tree somewhere near it, by all means use some sort of a feeding-shelf or -box at the window. The advantages of having the birds at such close range more than outweigh the occasional distractions that may occur in the schoolroom at unsuitable moments. Many teachers tell me that discipline becomes much easier after the birds have been attracted to the window, because the children are more willing to give strict attention to their studies when they are told that they will be allowed to watch the birds for a few minutes upon completing their lesson.

By no means purchase or have built a more elaborate feeding table than the children themselves can make. They should be made to feel that the coming of the birds is a direct result of their own efforts, and though the feeding station of the younger children may be somewhat crude, it is far better to have it so than that the children should feel that someone's help was necessary to bring the birds, or that their coming was not a direct response to their own efforts. With the youngest children one need but nail a cleat along the outside of the window-ledge to keep the food from blowing off, and fasten a branch to the window casing to which suet can be tied. It is better to use some sort of a shelf, however, that will give a little more room for the birds, so that more than one can feed at a time. Our native birds like lots of 'elbow room' while feeding.

For the older children there are numerous suggestions for window-boxes, 'anti-Sparrow' shelves, weather-vane feeders, food-hoppers, etc., in the past numbers of BIRD-LORE. It is often possible to coöperate with the manual training department in the construction of these more elaborate feeding devices.

The chief trouble with an open shelf at the window is that during snow-storms, when food is most needed by the birds, it is covered up. Some sort of a covered shelf is therefore better. A very convenient window feeding-box can be made from a soap-box or box of similar size, one



THE SIMPLEST FORM OF A WINDOW FEEDING-SHELF

A cleat nailed to the window ledge to prevent the food from blowing off, and a branch to which the suet is fastened

end of which is nailed to the window casing so that the open side faces south. If what is then the back is replaced by a pane of glass, so that it is well lighted within, the birds will not hesitate to enter and will be able to get the food even during the worst storms. No matter what sort of a window-shelf is used, it is always well to fasten a branch—and preferably an evergreen branch or small tree—to one side of it. Sometimes a number of branches can be used effectively to break the force of the wind and at the same time to decorate the shelf. The more the feeding station, wherever it is, looks like a little corner of the woods, the better the birds will like it.

When the schoolroom windows open on a court or narrow street or some place where, obviously, birds could not be attracted to the windows, one may have to be satisfied with feeding the birds some place in the school-yard, around the flag-pole, or on a post erected for the purpose. In such places the

weather-vane feeders and other more elaborate devices that have been described or advertised in BIRD-LORE are very satisfactory. A very simple and satisfactory shelf, however, can be made by any child out of the top of a barrel as here illustrated. The hoops are used to make a framework over part of



A HOME-MADE-FEEDING SHELF AND A CHICKADEE WAITING FOR A JUNCO TO FINISH EATING

the shelf, and this framework is covered with cloth or woven with evergreen twigs to keep out the snow.

This sort of a feeding-station could be put up in any place where a child wishes to feed the birds, and teachers should encourage their pupils to make feeding stations at their homes or in the nearest woods similar to the one at the school. After the feeding stations have become well patronized, it would make a most interesting field-trip to take the class from one to another, and it

would probably do more than anything else to clinch the children's interest in birds and nature.

ANTI-SPARROW DEVICES

Two different 'anti-Sparrow' devices have been recommended to readers of *BIRD-LORE*, the first in January, 1903, by W. W. Grant, and the other by W. E. Saunders in January, 1918, and those who are annoyed with the Sparrows at their feeding stations would do well to refer to them. The writer has found a



AN 'ANTI-SPARROW' FEEDING-BOX AT A WINDOW

The bottom is hinged and supported by a rubber band or a spring, so that it 'teeters' when the bird alights upon it. The suspicious House Sparrows are afraid to enter, but the native birds seem to enjoy it.

combination of the device recommended by Mr. Grant and the window-box described above quite successful in keeping the Sparrows away and feeding the native birds. The front half of the floor is held with leather hinges and supported at the corners by rubber bands or light springs, as can be seen in the illustration. When a bird enters the box this board teeters much as though the entire box were about to tip over. The wary House Sparrows have learned to be suspicious of such devices, and, though whole flocks of them perched on top of the box and peered over the edge at the food within, not one dared, at first, to enter. After other birds had been feeding for several weeks, a few Sparrows learned to enter without causing the board to teeter, but the slightest tap on the window sent them away in fright.—A. A. ALLEN, Ph.D., *Assistant Professor of Ornithology, Cornell University*.

SUGGESTIONS FOR WINTER BIRD-STUDY

1. How many birds do you know that winter in your locality? Are they permanent residents, found also in summer, or have they come down from the north?
2. Do you know upon what each bird feeds, whether seeds or insects, fruits or flesh? Prepare a list of the winter birds you know, stating after each whether it is a permanent resident or a winter visitant and upon what it feeds.
3. Some species that are permanent residents in a locality are known to migrate. Can you tell whether the individuals which are present in winter are the same ones that stay and nest during the summer, or do they move northward when spring comes and others from the south take their places? How could you determine this? The Editor has placed aluminum bands on the legs of Chickadees and White-breasted Nuthatches in the winter and then has seen them during the summer.
4. In what sort of places do you find birds in winter? Do you always find the same birds in the same places or do they wander about? Are all birds alike in this respect?
5. Have you ever had a wild bird feed from your hand? If not, why not?
6. Is there anyone in your neighborhood that knows the winter birds? Has he ever been invited to talk about them in the school?
7. How many people in your community are feeding the winter birds? Has anyone of them been invited to talk in the school?
8. How can you tell a male House Sparrow from a female in the winter? Is the difference any greater during the summer? What has happened?
9. Can you tell the track of a Crow in the snow when you see it? that of a Pheasant? that of a Sparrow? that of a Lark?
10. Where do the winter birds spend the night? Each kind has a place where it prefers to roost. Add this to your list of birds for as many species as you have observed, and send in the list to BIRD-LORE. The best lists and the best answers to any of these questions will be published in the January-February number of BIRD-LORE if they are received by the first of January.

FOR OR FROM JUNIOR OBSERVERS

MY FIRST EXPERIENCE WITH A REDSTART

Would some of BIRD-LORE readers like to hear of my experience with a Redstart? It happened one fall morning, early in October, when my family was spending the winter in a summer bungalow twenty miles from Chicago.

While we were eating breakfast in the kitchen, a small bird flew against the window twice. After breakfast, when Mother opened the door and stepped out on the back porch, the bird flew past her into the room. Sometimes he would fly on the rafters and would not come down again. We put water and bread crumbs on the rafters, and he drank the water but I do not know if he ate the crumbs. I sat by the open fireplace so the Redstart would not fly in and get burned. One time he flew into the kitchen and against a stove-pipe, but it did not burn him so far as we could tell.

He liked to flutter around the lamps, and when night came and we had to

light them, we thought he might get burned, so, when he flew down, Mother laid her hand on him and he did not make any fuss. We then opened the door and Mother opened her hand. He flew to a small walnut tree on the north-western side of our lawn, and we did not see him any more.—FRANCES REDFIELD HALLINAN (age, 10 years.), *Washington, D. C.*

[This is the right way to treat birds that fly into our dwellings. It was given its liberty and no attempt was made to cage it or to handle it.—A. A. A.]

A PET MAGPIE

We lived in Wasco County, Ore., for three years, and my two brothers and I had a few experiences with birds there. We are all lovers of nature and especially of birds.

When we first got 'Mag,' the Magpie, he had only a few feathers. We found him two miles from where we lived and carried him in one of our hats for about a mile, and then transferred him to a Crow's nest to carry him the rest of the way home. We kept him in this until he was old enough to sit on a perch.

Whenever he was hungry he would open his mouth, and we fed him worms, grasshoppers, and curd cheese. He also liked bread and milk. When he was old enough to follow us around, he would come to us for his food, and we would dig up worms for him, which he would pick up and swallow.

We started talking to him when he could just sit on a perch, always saying the same thing, so that he might learn to talk. About the time he was learning to eat by himself, he began to try to talk. He kept improving until, within the next month, he learned to whistle and call the dog, to say "Hello Mag," "Pretty Mag," "Nice Mag," and several other things. He also learned to laugh like a person, and it was a very merry laugh. He talked best when strangers were around, and he liked to hop on their feet and peck their shoes. Most of the little neighbor children were afraid of him, and he seemed to know it, for whenever they came around our place, he delighted in chasing them. When he called the dog, the dog would come and look puzzled.

At night 'Mag' slept in a shed where there was a ladder against the wall. One morning we found him in a pitiful condition, with his head badly crushed and swollen. The ladder had fallen down, and we supposed it had hit him. He could hardly make a sound and could eat only bread and milk. He lived but a few days after he was hurt. We kept his most beautiful tail feathers as a remembrance of our dear pet.—OLIVER CRANDALL (age 16 years), *Toppenish, Wash.*

[Magpies, Crows, and Jays make amusing pets if they are taken young and properly cared for, and many of them learn to talk, as did Oliver's. There is a common belief that their tongues must be split before they will learn to talk, but this practice is as cruel as it is unnecessary, for all that is required is a little patience in teaching them. Some learn much more quickly than others.—A. A. A.]

A RARE PET

Parrots, Paraquets, Canaries, and several other kinds of birds are common enough pets, but one does not often hear of a pet Blue Jay. Well, I have had a Blue Jay for a pet, a screeching, saucy Blue Jay, with a cap and body of pretty blue, black, and white feathers. This is a true story of a bird whose wild nature not many have been privileged to enjoy.

It was in the forenoon of a warm, sunny, summer day in the month of August. Everything was quiet; the sun was getting hot, and the air drowsy, when suddenly we heard most heart-rending screeches. I went out to see what was the matter, and found a gathering of excited children in the road, while hovering over the piazza were a couple of Blue Jays, screaming frightfully.

"What is it?" I asked.

"The cat has caught a baby bird," the children told me, "and he's gone under the piazza with it!"

That was what had happened; a cat had somehow or other caught a bird. We tried to make the cat come out but he would not. I think he was rather wise because, if he had come out then, the father and mother birds would have picked him to pieces. For a while the Blue Jays hovered around, screaming loudly and angrily, but they finally flew away. However, we could still hear them in the woods nearby.

Then the cat, foxy coward that he was, crept slowly out. My mother pulled a board from the piazza, and, reaching down, picked up the little baby Blue Jay. Strange to say, the cat had hardly hurt him. Aside from a few teeth-marks, little birdie was very much alive. I think the cat meant to eat him, but was so frightened by the older birds that he lost his appetite. What cat wouldn't?

The little bird could not have been more than two weeks old. My mother took him into the house, and, wrapping him in flannel, put him into a box. Later she mixed Indian meal and milk, which, little by little, she crammed gently down birdie's throat. It was very hard to make him swallow the mash, so we would put only a little bit into his mouth with a drop of water to wash it down. In a few days he began to like it. Whenever he was hungry he would open his little beak and cry for food. It was amusing to see him. It was the same as if the mother bird were feeding him.

Every day for a week the mother and father birds would come near the house and screech. It was pitiful to hear them, but we could do nothing. We didn't know where the nest was, and, as the little bird was unable to fly, we could do nothing but keep him.

Day by day the Blue Jay grew stronger and brighter. He was more willing to eat; in fact, he loved the mixture of meal and milk. We bought a large cage for him. His feathers grew thick rapidly, and, in a few weeks, he was a full-

fledged Blue Jay with beautiful glossy wings and tail. It was then that he began to get lovable—yes, lovable is a proper adjective for our Blue Jay's character.

Naturally imaginative, I continually pictured to myself policemen taking us into court for keeping the bird. I spoke of my fears repeatedly. One day my mother said, "We ought not to keep this bird, not only because it is unlawful, but also because the bird will not always thrive in the house. He is now old enough and strong enough to take care of himself, and I think I ought to take him out into the woods."

We didn't live far from the woods, so one morning she took him out, fully a mile or more from houses. She had been back home about an hour when, to our surprise, we heard a few loud screeches. Going to the door we saw—what do you think?—Master Blue Jay pecking at the door. Then he would cock his head to one side, and in his language say, "Let me in! Give me some mash. I'm not so easy to get rid of as you think. Had a hard time finding the place, but I finally reached here." Well, the situation was so funny that we all laughed. Then we took him in and fed him. We decided then and there to let him stay. A pet so dear and loyal we would keep, law or not.

After that occasion we could let Blue Jay fly anywhere inside the house, or outside, for there was no danger of his forgetting to come back. He loved his mash too well. In fact, he couldn't, or wouldn't, eat the seeds, leaves, and other things which wild birds eat.

We had a Canary in a small cage. The Canary was a beautiful singer, and the Blue Jay would listen intently while he sang. At times the Blue Jay would stare at the Canary for a long while, as if to say, "What kind of a bird are you? How do you sing so nicely when I can do nothing but scream?" Yes, I'm sure he asked this last question, for after a time, the Blue Jay would attempt to sing. Imagine that! A Blue Jay trying to imitate the sweet, trilling notes of a Canary.

At first his attempts were crude, but after several weeks Mr. Blue Jay could sing. He could actually sing, not so sweetly as a Canary, of course, but sing he could. It was wonderful to hear him begin to screech, then, stopping a few minutes as if in thought, he would finally trill a few notes, going from low to higher notes until his song was almost sweet. His breast would swell with pride. Then he would look maliciously at the Canary, as if to say, "Eh! You're not the only smart fellow around here!" Now this was very remarkable. Certainly it is not natural for a Blue Jay to sing. If it were, they would have learned long ago to do so, from their comrades in the woods.

Our visitors often desired to buy him, but we wouldn't sell him, first, because we had grown attached to him, and, second, because it was unlawful.

When we let him out of the cage, he would perch on our shoulders and peck playfully at our ears or hair. He never hurt, but he could if he wished. Here is proof: Sometimes people would come to the house at night. Of course, we

would immediately show them our Blue Jay. We would hold the lamp up to the cage so that they might get a good look at him. Blue Jay would scream loud and long, as if to say, "Take away that lamp. Can't you see I want to sleep? That light dazzles my eyes!" Anyone who put his finger into the cage at such a moment was in danger at once of having a piece taken out of it.

Our Blue Jay also loved to splash in a dish of water and it was amusing to see him. He was like a child paddling in the water, and he enjoyed it much. In many other little things he was so clever that we loved him as much as it is possible to love a dumb friend. He was so gay, so stubborn, and so lovable that he was almost human. He was dumb, yes; but he seemed to understand all we said to him. He made himself understood, too. It was not a language of words, but of understanding. Yet some people think our dumb friends have no brain power. If that is so, what made Blue Jay show such intelligence?—(Miss) MARY CAMARA, *Hudson, Mass.*

[Miss Camara, like Mrs. Le Perrier with her pet Robin, shows what pleasure can be derived from a pet that is given its liberty. All of the members of the Crow family make interesting pets because of their apparent intelligence and because they are easily cared for. Miss Camara's attitude toward the laws for the protection of birds is highly commendable.—A. A. A.]

A PET ROBIN

I was staying on a farm in Rockland County, New York, enjoying outdoor life, feeding chickens, and taking an interest in my surroundings.

July 10, while walking, I heard the plaintive cry of a little bird, which I discovered on the grass at my feet. I picked up the poor little thing which had fallen from its nest. It was so tiny, all head and a big mouth, and absolutely without feathers, so I could not guess the kind of bird it was.

I decided to try to rear it. I carried it to my room and made a nest in a little box which I placed on a large and deep window-sill that faced south.

I fed my bird sparingly with little bits of cooked oatmeal and angleworms every half hour. After a few days, feathers began to appear and the bird left his nest, desiring a perch. It being a wild bird, I did not put him in a cage, as I intended to give him his freedom when he was old enough to feed himself. Placing a straight-backed chair on the window-sill, the little bird was satisfied with the rungs under the seat for perches, and a large box of fine gravel completed arrangements for his comfort.

It was most interesting to watch his development, for his feathers grew rapidly, and, after two weeks, I discovered that he was a Robin. Soon he began to use his wings, flying around the room, but always returning to the window-sill.

'Pretty,' as I named him, was absolutely without fear, knew me so well he sat on my finger, and sometimes, while I was reading, would take a nap in the

palm of my hand. When three weeks old he enjoyed a morning bath in a large wash-basin. When five weeks old, he was fully fledged and very beautiful.

At night, when he went to sleep with his head under his wing, I covered the chair with a heavy bath-towel, leaving one side open. At 10 P.M. I fed my little friend a worm and then he slept until 5.30 A.M., when he expected breakfast. If I did not rise at his call, he flew around to the side of my bed and made excited chirpings. He would have liked me to feed him, but as he was able to pick up his food, I did not do so. It was amusing to see him tackle the wriggling worm.

When he was six weeks old I decided to set him free. One Sunday evening, at 6 o'clock, I went into the open in front of the old farm. The place is surrounded with beautiful trees and lilac bushes. He was sitting on my finger, then, with a chirp, flew to the top of a very high weeping willow. I grieved to see him take flight, but was glad he was strong and beautiful.

Next morning, at 5.30, I went out, whistling and calling him, but never expecting a response. In an instant, however, he was on my shoulder, and I gave him his breakfast of worms. The next morning I called from my window; he entered, made himself perfectly at home, took his bath, then hopped out into the sunshine, preened, shook his wet feathers and made himself beautiful.

All this was most enjoyable, but one morning I saw the barn cat stalking 'Pretty,' so decided I must place him elsewhere. I gave him to a lady living some distance from the farm. She had neither dog nor cat, just a sweet little boy who was charmed with the Robin, and 'Pretty' was satisfied with his new home, which greatly resembled the farm.

Now comes the sad part of the story. The lady to whom I gave the Robin had two little nieces who came on a visit for a few days. The little Robin had the habit of perching on the back of the baby's chair (the family took breakfast on the porch), and before anyone could prevent, the little niece grabbed the bird, squeezed him, and pulled out part of his tail. He escaped and was never seen again.

Let us hope he recovered from the rough handling and was able to migrate with his feathered companions.—GABRIELLE LEPERRIER, *Rockledge Manor, Yonkers, N. Y.*

[Mrs. Le Perrier has experienced the joy of saving the life of a wild bird and feeling its response to her kindness. The pleasure which one derives from a wild bird's coming to one's call is greater by far than one ever gets from a bird in a cage. The sad ending of the story shows the necessity for boys and girls learning gentleness in all things and especially in their attitude toward birds and animals.—A. A. A.]

The Audubon Societies

EXECUTIVE DEPARTMENT

Edited by T. GILBERT PEARSON, Secretary

Address all correspondence, and send all remittances for dues and contributions, to the National Association of Audubon Societies, 1974 Broadway, New York City.
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SAMUEL T. CARTER, JR., <i>Attorney</i>	

Any person, club, school or company in sympathy with the objects of this Association may become a member of it, and all are welcome.

Classes of Membership in the National Association of Audubon Societies for the Protection of Wild Birds and Animals:

\$5 annually pays for a Sustaining Membership
\$100 paid at one time constitutes a Life Membership
\$1,000 constitutes a person a Patron
\$5,000 constitutes a person a Founder
\$25,000 constitutes a person a Benefactor

FORM OF BEQUEST:—I do hereby give and bequeath to the National Association of Audubon Societies for the Protection of Wild Birds and Animals (Incorporated), of the City of New York.

ANNUAL MEETING

The fifteenth annual meeting of the National Association of Audubon Societies assembled in the American Museum of Natural History, New York City, on October 27 and 28, 1919. On the evening of October 27 a public meeting to honor the memory of Theodore Roosevelt was held, in connection with the Museum authorities, at which the following program was rendered:

"Roosevelt and Bird Protection," by T. Gilbert Pearson; "Roosevelt the Nature-Lover," by Frank M. Chapman; "Roosevelt and American Animals," Ernest Thompson Seton; "Roosevelt's Africa," Carl E. Akeley; and "Roosevelt on the Rio Roosevelt," by George K. Cherrie.

The annual business meeting of the Association was called to order at 10 o'clock A.M. on October 28, Dr. T. S. Palmer, First Vice-President presiding. The convention was welcomed to the city and to the Museum in an address by Dr. Frederic A. Lucas, Museum Director. Reports of the Secretary, Treasurer, and Auditing Committee, which were read and approved, will be found printed elsewhere in this issue of BIRD-LORE.

Mrs. Mabel Osgood Wright and Dr.

George Bird Grinnell, whose terms of office as directors had expired, were re-elected, and Prof. Barton W. Evermann, of California, was added to the list of the Advisory Board of Directors.

The following Field Agents of the Association told of their work the past year in their several fields of operation: Edward H. Forbush, for New England; Dr. Eugene Swope, Ohio; Winthrop Packard, Massachusetts; Miss Frances A. Hurd, Connecticut; Arthur H. Norton, Maine; Mrs. Mary S. Sage, Long Island; and Herbert K. Job in charge of "Applied Ornithology."

The meeting also heard interesting talks by Mrs. Mabel Osgood Wright, President of the Connecticut Audubon Society; T. F. McIlwraith of the Hamilton (Ontario) Bird Protection Society; B. S. Bowdish, Secretary of the New Jersey Audubon Society; Mrs. F. H. Coffin and Mr. Davis of the Scranton (Pennsylvania) Bird Club; and Prof. H. L. Madison, Secretary of the Rhode Island Audubon Society.

The members and guests of the Association enjoyed luncheon together in the Museum Cafe. In the afternoon a most interesting Educational Conference, under the leadership of Edward H. Forbush, was

conducted. Round-table discussions lasted until late, and enthusiasm ran so high that Mr. Forbush found difficulty in adjourning the meeting.

At the Directors' meeting the officers of the Association were reelected for the coming year, reports were made, and action taken on several business matters pertain-

ing to the good of the Association. The plans for the coming year centered largely around an effort to greatly extend the organization of the Junior Audubon Classes among children, and to seek by every worthy means to increase the number of bird sanctuaries and wild-life reservations throughout the country.



TWO BOYS, A GUN AND A KNIFE

The above picture, from a photograph, illustrates the need of Junior Audubon Societies in the schools of Hemlock, Ohio. The facts of the case are these: A young man named John Bieseman, interested in bird-protection, secured from the office of the National Association some of the cloth warning notices regarding the protection of birds, which were distributed during the war. He tacked these to trees and fences in and around Hemlock, where they might be seen by the public. Another boy, whose name will not be given, the leader of a small gang, while afield on one of his many

trips with a gun, slashed the sign with his knife and then nailed to it a Golden-Crowned Kinglet and the wings and tail of a Brown Thrasher, which he shot in the immediate vicinity. Both of these birds have a pronounced economic value and were among the wild animal assets of that section. Both birds are protected by the state laws of Ohio and by the United States law. The case was reported to both the state and Federal officials, but so far as has been learned no successful action has been taken by either of them.



NEW YORK CONSERVATION COMMISSION ENFORCING BIRD LAW. JACOB O. SNYDER, OF RENSSELAER, AND A STRING OF FLICKERS TAKEN FROM AN ITALIAN HUNTER. PROSECUTION FOLLOWED

Annual Report of the National Association of Audubon Societies for 1919

CONTENTS

REPORT OF T. GILBERT PEARSON, SECRETARY

INTRODUCTION.—FIELD AGENTS.—AFFILIATED SOCIETIES AND BIRD CLUBS.—SUMMER SCHOOLS.—AUDUBON WARDEN WORK.—REPORT OF JUNIOR AUDUBON CLASSES.—MISCELLANEOUS FACTS.—FINANCES.

REPORTS OF FIELD AGENTS

EDWARD HOWE FORBUSH.—DR. EUGENE SWOPE.—WINTHROP PACKARD.—WILLIAM L. FINLEY.—HERBERT K. JOB.—ARTHUR H. NORTON.—FRANCES A. HURD.

REPORTS OF STATE AUDUBON SOCIETIES

CALIFORNIA, COLORADO, CONNECTICUT, DISTRICT OF COLUMBIA, EAST TENNESSEE, ILLINOIS, INDIANA, KENTUCKY, MASSACHUSETTS, NEW HAMPSHIRE, NEW JERSEY, OHIO, OREGON, RHODE ISLAND, UTAH.

REPORTS OF AFFILIATED ORGANIZATIONS

AUDUBON CLUB OF NORRISTOWN (PA.).—BUFFALO (N. Y.).—AUDUBON SOCIETY—BURROUGHS JUNIOR AUDUBON SOCIETY OF KINGSTON (N. Y.).—CAYUGA (N. Y.) BIRD CLUB.—COCOANUT GROVE (FLA.) AUDUBON SOCIETY.—COLUMBUS (OHIO) AUDUBON SOCIETY.—CRAWFORDSVILLE (IND.) AUDUBON AND NATURE-STUDY CLUB.—CUMBERLAND COUNTY (ME.) AUDUBON SOCIETY.—ELGIN (ILL.) AUDUBON SOCIETY.—ERASMUS HALL AUDUBON BIRD CLUB.—GREYSTON (N. J.) BIRD CLUB.—HARTFORD (CONN.) BIRD-STUDY CLUB.—HAMILTON (ONT.) BIRD PROTECTION SOCIETY.—LOS ANGELES (CALIF.) AUDUBON SOCIETY.—MERIDEN (CONN.) BIRD CLUB.—MINNEAPOLIS (MINN.) AUDUBON SOCIETY.—MISSOULA (MONT.) BIRD CLUB.—NEIGHBORHOOD NATURE CLUB OF WESTPORT (CONN.).—NEW YORK BIRD AND TREE CLUB.—PASADENA (CALIF.) AUDUBON SOCIETY.—RHINEBECK (N. Y.) BIRD CLUB.—ROCKAWAY (N. Y.) BRANCH NATIONAL AUDUBON SOCIETY.—SARATOGA (N. Y.) BIRD CLUB.—SCRANTON (PA.) BIRD CLUB.—SEATTLE (WASH.) AUDUBON SOCIETY.—SOUTH BEND (IND.) HUMANE SOCIETY.—SPOKANE (WASH.) BIRD CLUB.—VIGO COUNTY (IND.) BIRD CLUB.—WALLACE (IDAHO) BIRD AND NATURE-STUDY CLUB.—WATERTOWN (N. Y.) BIRD CLUB.—WEST CHESTER (PA.) BIRD CLUB.—WILD-LIFE PROTECTIVE ASSOCIATION (WIS.).—WINTER PARK (FLA.) BIRD CLUB.—WYNCOTE (PA.) BIRD CLUB.

LIST OF AFFILIATED SOCIETIES AND BIRD CLUBS

REPORT OF TREASURER

LISTS OF MEMBERS AND CONTRIBUTORS

BENEFACTOR, FOUNDER AND PATRONS.—LIFE MEMBERS.—ANNUAL MEMBERS AND GENERAL CONTRIBUTORS.—CONTRIBUTORS TO FUNDS.

REPORT OF T. GILBERT PEARSON, SECRETARY

INTRODUCTION

With state and Federal legislation for the protection of America's wild birds and animals now in a far better condition than we had hoped for during the long years of struggles for this accomplishment, undoubtedly the two most important problems before the Audubon Societies today is the conducting of an intense campaign in support of these laws, and the creation and maintenance of greatly increased numbers of bird-reservations. With a growing population that possesses the inherited instinct of the hunter, which is strong in American life, the need of many "Cities of Refuge" for our hard-pressed bird-life is of the utmost importance.

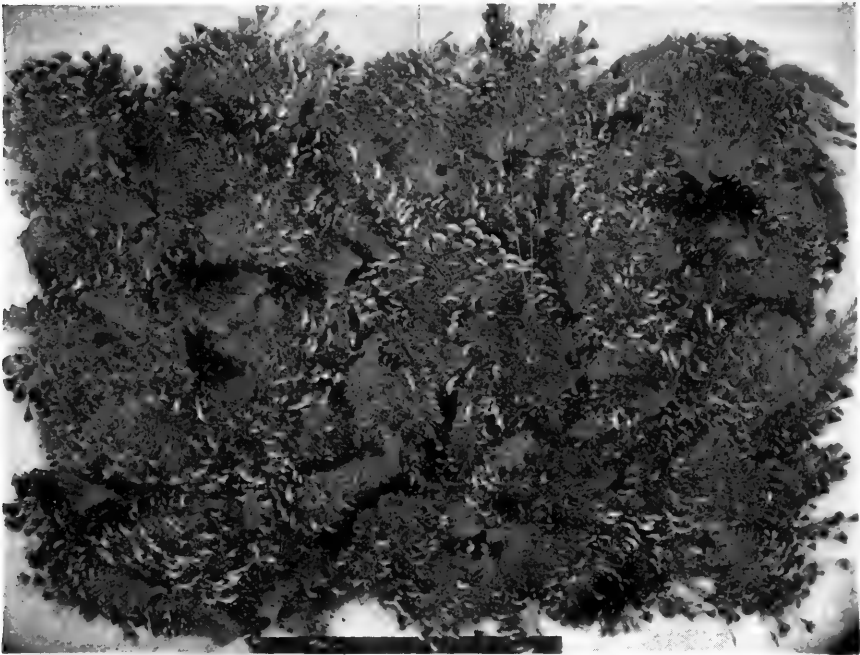
To teach children the economic value of birds to the nation, and the great pleasure and profit to be derived from the study of their activities, is a work to which the Audubon Societies should now devote much of their energies with renewed effort. For the past nine years the National Association, through the formation of Junior Audubon Classes, has been able to give instruction in bird-study to more than one million children. This, of course, is the largest accomplishment ever effected in the way of teaching children about birds, but to reach and influence the rising generation as it should be reached, not less than this number should be instructed every year. The Association has the experience and machinery for developing this plan in an almost unlimited manner, if only the funds could be made available for adequately enlarging the plan. Likewise, a fund of \$500,000 could be most splendidly used in creating and guarding additional bird-reservations for which there is today an imperative need.

The past year has been a most active one for the Association. In legislation we have coöperated with others in helping to secure appropriations for the carrying out of the provisions of the Bird Treaty Act, as well as in combating proposed adverse laws and working for good ones in the states of North Carolina, New Jersey, Maine, Massachusetts, Oregon, and elsewhere.

With the coöperation of our members we have been able to report a large number of violations of the bird-protective laws to officials of various states and to the Federal Government, as well as the bird-protective officers in Canada.

We have financially assisted various undertakings, for example, paying the expenses of a Government agent in prosecuting an aigrette case in South Carolina; erecting a series of bird-boxes at the Red Cross Headquarters, Camp Merritt, N. J.; presenting four sets of stereopticon slides to the United States Department of Education; making some cash contributions to affiliated societies, and helping, as we have had opportunity, in enforcing the plumage law in the state of New York. It has been our pleasure to work, with others,

in stopping the sale of \$150,000 worth of bird plumage seized by custom officials of New York City, and gladly coming to the defense of the game-protective departments in two states that were most unjustly attacked. We have presented framed pictures of birds to bird clubs, secured back numbers of *BIRD-LORE* for members who desired to complete their files; filed strong complaints with state and Federal officials against the shooting of birds from aeroplanes in New Jersey and Maryland; conducted correspondence with reference to proposed bird treaties between the United States and the southern republics; and aided in encouraging the establishment of cemeteries, parks, and other territories as bird sanctuaries.



A PILE OF 150 GOURA PLUMES SEIZED FROM SMUGGLERS AT THE PORT OF NEW YORK AND PRESENTED TO THE NATIONAL ASSOCIATION OF AUDUBON SOCIETIES

More than 60,000 letters at the New York office alone have claimed the attention of the Executive Officer and the office force, and the Secretary has personally engaged in such widely diversified activities as attending a legislative hearing on the Deer Law in Albany; supplying material on conservation to the Czecho-Slovak Republic; investigating a reported sale of American Woodpeckers in a New York bird-store, which turned out to be South American Parrots; and explaining to a correspondent why the Association could not immediately raise a fund of one million dollars to exterminate English Sparrows.

The clerical force in the office at headquarters numbers about twenty, and

in the spring months an additional eight or ten clerks were employed. The influenza epidemic during the closing months of 1918 interfered severely with all office work. Three of the staff of assistants have died during the year, two of them from this dreaded disease. Only four days ago there was also taken from us by death, Mrs. F. J. Torpey, the Association's cashier. For the past thirteen years this most unusually capable and lovable woman has been the central figure among the office clerks, and numerous friends of the Association will readily recall her by her maiden name, Miss Elizabeth Howard.

Feeling that the bird-lovers of the country would like to provide some special testimonial to the memory of Theodore Roosevelt, a call was made during the spring for subscriptions to erect a Roosevelt memorial bird-fountain. This was the first National Roosevelt memorial project presented to the public. As a result of the call there have been received, thus far, something over \$13,600 for this purpose, and subscriptions will continue to be taken until it is felt a sufficient fund has been accumulated.

FIELD AGENTS

During the year just closed, Edward H. Forbush, Supervising Field Agent for New England, has continued his extensive lecturing and correspondence work, and in his frequent letters to the public, regarding the seasonal distribution of birds, has had great influence in increasing interest in New England ornithology.

Winthrop Packard, Field Agent for Massachusetts, has, in addition to his duties as Secretary of the Massachusetts Audubon Society, devoted a large amount of time to the interests of the National Association, including working for the enrollment of Junior members, general correspondence, and soliciting financial aid.

Dr. Eugene Swope, Agent for Ohio, has had practically entire charge of the Junior Audubon activities in that state. His lectures and correspondence continue to be an important phase of bird-work in the Middle West.

William L. Finley, of Portland, Ore., Agent for the Pacific Coast states, has been engaged in lecturing and has greatly increased his series of moving-picture films. During the year he has been much occupied in coöperating with E. W. Nelson and Dr. George W. Field of the Biological Survey in their losing fight to preserve the integrity of Malheur and Klamath Lake Reservations.

Mrs. Mary S. Sage, who for some time has been engaged in war work, returned to the Association on October 1 and is now employed in lecturing and organizing Junior Audubon Classes on Long Island. Her work is being carried on in coöperation with the Long Island Bird Club.

Herbert K. Job, in charge of our field "Applied Ornithology," has conducted the second successful summer school at Amston, Conn. The game experimental

farm which he has developed at that place has grown rapidly, and many birds were raised there the past season, including at least 1,200 Ring-necked Pheasants.

Arthur H. Norton, Agent for Maine, has again kept a watchful eye on legislative matters in Augusta, made inspections of sea-bird colonies on the coast of Maine, and has been of practical assistance to local organizations and students interested in bird-study in that state.

Miss Frances A. Hurd has been very busy most of the year in lecturing and organizing Junior Audubon Classes throughout Connecticut. The results of her work, as shown by the Junior enrollment in that state the past year, were unusually successful.

Full reports of the various field agents' activities will be published elsewhere in connection with this report.

AFFILIATED SOCIETIES AND BIRD CLUBS

The effect of the diverting influences of the war in curtailing the work of many of the affiliated organizations is still noticeable. This is particularly true of various local societies and bird clubs. The majority of the State Audubon Societies have remained as active as before, especially good work being done in California, Colorado, Connecticut, Illinois, Massachusetts, New Hampshire, New Jersey, and Oregon. Indiana continues to hold the lead in the matter of the extent and duration of its program in connection with its annual meeting. This convention, held every year in a different city, has come to be a notable, state-wide function. If every phase of the Audubon work in Indiana was conducted on the same scope, we would have an institution whose activities would be the talk of the country.

The societies and clubs now affiliated with the National Association number 142. Many of them have done splendid work, and the records of their accomplishments will be published in connection with this report.

SUMMER SCHOOLS

For the fifth year, the Association has been able to coöperate with directors of summer schools in providing courses in bird-study. As heretofore, these courses were made possible through the generous contribution to the Association of one of our patrons, Miss Heloise Meyer.

During the month of July, Dr. G. Clyde Fisher, of the American Museum of Natural History, New York City, conducted a course in bird-study at the Summer School of the University of Florida, located in Gainesville.

Dr. Fisher reports: "The work consisted of three parts as follows: Three recitations a week in which Pearson's 'Bird Study Book' was used as a text; four field-trips each week, devoted to the identification of birds by sight and

by calls and songs and to the study of the habits of birds; and five popular illustrated evening lectures. Forty-one students were enrolled in the class, and twenty-six of these completed the work and earned credit. Between sixty and seventy species of birds were identified in the field during the month."



DR. G. CLYDE FISHER (FRONT ROW, LEFT END) AND BIRD CLASS HE CONDUCTED FOR THE ASSOCIATION AT THE UNIVERSITY OF FLORIDA IN THE SUMMER OF 1919

Miss Bess R. Green gave a course in popular ornithology at the University of Colorado, located at Boulder. This extended over a period of five weeks. The class met twice a week for lectures and eight field-trips were taken. These were of two hours' duration and extended from 5.30 to 7.30 A.M. Characteristic markings, manner of flight, and general habits of birds of the plains, stream-side, foot-hills and cañons were studied in the field. Mounted specimens were used for close-range work in the laboratory.

Miss Lillian Finnell, of Tuscaloosa, Ala., gave popularly prepared lectures on birds at the summer schools located at the following places: Meridian and Hattiesburg, Miss.; Natchiteches and Baton Rouge, La.; Howard College and Montevalle, Ala.; and at the University of Alabama at Tuscaloosa. She also spoke at the University of Georgia. In addition to these lectures, various classroom talks were given. This work was conducted from June 24 to July 16.

Miss Mary Bacon, of Athens, Ga., gave a course in bird-study at the Georgia State Summer School, located at Athens, extending over a period from June

30 to August 2. Two hours daily, for six days each week, was devoted to teaching. Forty-six pupils, most of them teaching in Georgia schools, were enrolled. Free public lectures to the entire Summer School were delivered in the chapel. Reading-courses on birds, for study in the University library, were made out and systematically superintended. The publications of the National Association were distributed and studied and much personal work done with teachers outside the classrooms.

At the Emory University, in Georgia, the bird-work was conducted by William H. LaPrade, Jr., who reports: "The classwork consisted of ten one-hour periods, devoted largely to lectures on which the class took notes. The topics covered in more or less detail were Classification of Birds; Birds of the Southeast; Migration; Economic Value of Birds; Bird Conservation; and Audubon Society Work. The lectures were supplemented by several hours' study of specimens, with 1,600 skins, besides nests and eggs, and several bird-walks. Besides the regularly enrolled class of twenty, there were a number who attended lectures when there was no conflict with other classes. One general bird-talk was given at night. Under an old regulation of the Atlanta public school system, forbidding teachers to collect any money from pupils, the Audubon Society has been unable to secure Junior Chapters in this city. The director of nature-study in the Atlanta public schools was the most enthusiastic member of our class, and steps are being taken to change the regulation in time to organize Junior Societies in the spring."

Miss Katharine H. Stuart, of Alexandria, Va., conducted a bird-course at the University of Virginia. This consisted of classroom work and field excursions. Miss Stuart states that in these early morning field-walks as many as forty students would appear regularly. She also reports: "The field-work was most enjoyed and included the study of about thirty species of birds—their color, markings, nests and eggs, songs and habitat. Eighty-five species were seen on these walks, in a radius of about a mile and a quarter. Our Audubon Bird- and Nature-Study Exhibit attracted wide attention and was greatly enjoyed by a large percentage of the student body and instructors, as well as by many children of the neighborhood."

The Association also supplied two lecturers at the Amston (Conn.) Summer School.

AUDUBON WARDEN WORK

By a new Federal law, which went into effect on July 1, 1919, no employee of the Government may receive any additional compensation from organizations or individuals. This automatically brought to an end the long-standing coöperation between the National Association and the Biological Survey in the matter of joint payment of the salaries of wardens on some of the Government bird-reservations.

The three patrol boats of the Association, viz., *Grebe, 2nd*, on Lower Klamath Lake, Ore. and Calif.; *The Audubon*, on Pelican Island Reservation, Fla.; and the *Royal Tern* on Breton Island Reservation, La., have been leased to the Biological Survey for an indefinite period at a nominal rental.

In this connection it might be well to record that when the system of establishing bird-reservations first went into effect, in 1903, there were no Government funds available for paying for warden service, nor was any money available until 1909. Fifty-one bird-reservations had by that time been created. During these six years such direct protection as the reservations received was from wardens employed wholly by the National Committee of Audubon Societies, and after January, 1905 by the National Association.



THE "ROYAL TERN," PATROL-BOAT OF THE NATIONAL ASSOCIATION OF AUDUBON SOCIETIES, OPERATING ALONG THE COAST OF LOUISIANA AND MISSISSIPPI
THEODORE ROOSEVELT AND JOHN M. PARKER AT THE STERN

Our coöperation with the Biological Survey in this way has always been of the most pleasant character, and our close relations in other phases of conservation work will continue as heretofore.

As pointed out in Mr. Finley's report, the great colonies of birds on Lower Klamath Lake are on the verge of total extinction as result of drainage, and

Malheur Lake, the largest breeding-place of wildfowl in the United States, will probably pass into oblivion in a short time.

With these deplorable exceptions, the colony bird-life of the country, in so far as has come under the influence of the Association, has enjoyed a prosperous year.



SECTION OF BUZZARD ISLAND HERON COLONY, NEAR CHARLESTOWN, S. C. THE WHITE PATCHES ARE YOUNG LITTLE BLUE HERONS

Photographed by T. Gilbert Pearson

Reports of disasters through storms have been less numerous this year than usual. The Gulls, Terns, Eider Ducks, and Black Guillemots on the great breeding islands off the coast of Maine have been especially successful. On July 1 past, the Secretary, in company with Arthur H. Norton, visited Bluff Island and Stratton Island, where we estimated 15,000 Terns were assembled at the time. One pleasing feature was to discover that in addition to the great numbers of Common Terns and Arctic Terns, small groups of Roseate Terns were breeding on these islands. The Gull colonies in Moosehead Lake, Maine, have shown an increase, and those of the Great Lakes appear to have done equally well. Mr. Forbush, who carefully inspected the sea-bird colonies of the Massachusetts coast during July, reported them to be in splendid condition.

The usual number of wardens were on duty protecting colonies of Egrets, Herons, and Ibises in Florida. The birds there seem to have had an average year. No killing was reported from any of the ground areas.

On June 12 of this year, the Secretary visited three colonies on the South Carolina coast. Two of these appeared to have been deserted the present season after the birds had built many nests. No reason could be ascribed. R. F. Grimball, in charge of the Buzzards' Island rookery, owned by the National Association, stated that his birds evidently left and went several miles to the eastward

to be with the colony on another 'Buzzards' Island' which has long been guarded by the Association's warden, Sandiford Bee.

On visiting this place in company with Mr. Bee, I found several hundred pairs of Little Blue Herons, Louisiana Herons, and Black-crowned Night Herons. Not more than eight or ten Snowy Egrets were identified, but as many young Little Blue Herons, in the white phase of plumage, were on the wing, it is quite possible that others were present. The warden stated that numbers of the Egrets were away feeding and that the total number resorting to the island was about sixty-five. The Georgia and North Carolina Egret colonies enjoyed a prosperous season.

In all, the Association employed the past year thirty-six wardens. It is impossible to state with any degree of accuracy the number of birds guarded in the various Audubon colonies during the breeding season, but the number must have been close to two million.

REPORT OF JUNIOR AUDUBON CLASSES

Thanks chiefly to the splendid and unfailing support of a large-hearted, but self-effacing patron of the Association, the Junior Department of the Association's activities has continued to function on its hitherto large plan of operation. During the early months of the past school year, the epidemic of influenza closed thousands of schools throughout the land. Hence, the organiza-



A JUNIOR AUDUBON CLASS AT MORGANTOWN, W. VA. ONE OF THE 6,204 JUNIOR BIRD-STUDY CLUBS FORMED BY THE NATIONAL ASSOCIATION OF AUDUBON SOCIETIES THE PAST YEAR

tion of children into bird-study classes did not get well under way until the spring months, when the interest among teachers and pupils showed much of its former vigor. As a result, at the close of the school year, on June 1, the enrollment of Junior Members totalled 179,794, which was an increase of 20,711 over the previous year. The enrollment thus far this fall is much in excess of the same period last year, and indications point to a most successful season with the children.

In this connection I wish to make special mention of the splendid coöperation which many of the state and local societies throughout the country are giving in the organization of the Junior Audubon Classes. A number of these have appointed some officer or member as a special agent to visit the schools, talk to the teachers and children, supply them with the "Announcement to Teachers," circular furnished by the National office, and urge the formation of Junior groups. The Long Island Bird Club has provided funds, making it possible to keep a lecturer in the Long Island schools for this work throughout the entire season.

The record by states the past year is as follows:

SUMMARY FOR YEAR ENDING JUNE 1, 1919

State	Classes	Members
Alabama.....	14	407
Arizona.....	2	73
Arkansas.....	4	254
California.....	96	3,497
Colorado.....	70	2,099
Connecticut.....	486	13,156
Delaware.....	4	133
District of Columbia.....	1	39
Florida.....	14	427
Georgia.....	12	384
Idaho.....	26	849
Illinois.....	259	8,714
Indiana.....	147	4,576
Iowa.....	150	4,733
Kansas.....	48	1,566
Kentucky.....	21	506
Louisiana.....	8	171
Maine.....	76	2,132
Maryland.....	55	1,963
Massachusetts.....	455	13,023
Michigan.....	182	5,008
Minnesota.....	318	8,517
Mississippi.....	5	185
Missouri.....	112	3,259
Montana.....	37	979
Nebraska.....	86	2,281
Nevada.....	8	185

Name	Classes	Members
New Hampshire.....	58	1,626
New Jersey.....	203	6,325
New Mexico.....	3	88
New York.....	917	25,385
North Carolina.....	16	476
North Dakota.....	29	759
Ohio.....	858	21,631
Oklahoma.....	46	1,421
Oregon.....	108	3,753
Pennsylvania.....	515	16,484
Rhode Island.....	12	410
South Carolina.....	18	771
South Dakota.....	31	1,069
Tennessee.....	9	289
Texas.....	26	827
Utah.....	19	416
Vermont.....	34	1,018
Virginia.....	28	851
Washington.....	89	3,214
West Virginia.....	50	1,564
Wisconsin.....	151	3,782
Wyoming.....	10	268
Canada.....	278	8,251
Totals.....	6,204	179,794

Contributions received for this work the past year have come from the following sources:

Unnamed Benefactor	\$20,000
Long Island Bird Club.....	2,200
R. R. Colgate.....	1,000
General Coleman duPont.....	500
Other subscriptions.....	865
	<hr/>
	\$24,565

MISCELLANEOUS FACTS

During the year we issued three new Educational Leaflets. These were No. 98, Least Bittern; No. 99, Red-eyed Vireo; No. 100, Turkey Vulture.

Our Department in BIRD-LORE occupied 180 pages. Of Educational Leaflet units, reprints were made to the number of 3,524,500; other circulars, announcements to teachers, membership blanks, and campaign literature amounted to 405,700 pieces. Of letterheads and envelopes, 267,000 were required. Our Supply Department sold 865 stereopticon slides, slightly above the actual cost. Our moving-picture films were sent out on a number of occasions at a nominal cost.

FINANCES

During the year the Association enrolled 85 life members at \$100 each. The sum received from this source, together with a bequest of \$200 from Miss Annie M. Washburn, of New Bedford, Mass., and a few gifts yielded a total of \$8,765 added to the General Endowment Fund. The sustaining membership, with its fee of \$5 annually, has this year numbered 4,400, which makes an increase of 378 members over the previously high record of 1917.

The total cash income of the Association during the year has been \$132,662.36.



GEORGE E. CUSHMAN, AUDUBON SOCIETY WARDEN AND LOCAL GAME WARDEN
GIVING FOOD TO STARVING WILD DUCKS NEAR PORTLAND, MAINE

REPORTS OF FIELD AGENTS

REPORT OF EDWARD HOWE FORBUSH, GENERAL AGENT FOR NEW ENGLAND

Perhaps the greatest catastrophe to bird-life in New England during the year was the severe, cold storm of March 29, coming as it did after a long period of mild weather, which had tempted many birds to advance into New England. In western Connecticut, Massachusetts, and Vermont this storm was very cold, with high winds and deep snow, and all through the region thousands of birds perished. Bluebirds and Tree Swallows particularly suffered severely and many of the more hardy birds, such as Juncos, were overwhelmed in the storm.

The Massachusetts law, under which foreigners are not allowed to carry guns, has resulted in the seizure of many firearms formerly employed by aliens in shooting birds. These weapons were seized by officers of the Massachusetts Commissioners on Fisheries and Game, but it is impossible to stop altogether the snaring, netting, and trapping of small birds by these foreign fowlers. Also, many young birds are taken from the nests when nearly fledged and are plucked and dressed for the table. An instance of this came to light on Cape Cod during the past summer: Two Greek fishermen were arrested in a colony of common Terns. They had two large sacks, one of which was already filled with young birds, and they were filling the other when they were taken. Only a few of the birds were dead, and the others were liberated by the officers. It is said that these fishermen visit the colonies of sea-birds and take the young birds to their boats, where they are kept on ice and used both as food and as bait.

Your agent has visited most of the colonies of Gulls and Terns in Massachusetts during the past summer, and finds that they not only have increased in number but several new and large colonies have become established. In two localities on Cape Cod, where in recent years the sea has built up large shoals, colonies of Common and Roseate Terns have settled and thrived. Late in the season a considerable number of Arctic Terns appeared and nested in one of these colonies. Their eggs were laid late in July or early in August, and nearly all the young birds were able to fly by September 1. The increase in nesting Arctic Terns this season was very marked.

Laughing Gulls, which have been nesting in the protected colony on Muskeget Island for many years but until this year have not been known to nest elsewhere, have become disseminated along the coast well to the northward of Cape Cod. A few are believed to have bred on the Cape during the past season. The number of Herring Gulls remaining on the coast of Massachusetts in summer has been increasing gradually, and a few now are breeding here. Least

Terns, which a few years ago were not known to breed anywhere in New England except on Martha's Vineyard, now have established a colony on another island, and at least two on the mainland. The nesting-places of all these birds have been inundated more or less during the season by high tides, but in most cases only a small proportion of the eggs or young were lost. The season, on the whole, has been a successful one.

It is well known that in inhabited regions sea-birds have great difficulty in maintaining colonies on the mainland. The successful breeding of Terns on Cape Cod is largely due to the efforts of the Massachusetts Commissioners on Fisheries and Game, who appointed special wardens to serve during the breeding-season and to protect these birds against visitors and their natural enemies. Notwithstanding the presence of these wardens, some colonies have suffered somewhat from the attacks of Crows and cats, and have been disturbed more or less by visitors. But it is only through the protection afforded by the Commission that such colonies can exist.

Information has been received from Canadian authorities to the effect that Gulls were shot in Maine and the skins smuggled into Canada, where they were sold for millinery purposes and as souvenirs, largely to American tourists. We believe that this traffic has been checked by our Canadian friends, and will be closely watched in the future.

During the past breeding-season, Kingbirds seem to have increased greatly in southern New England, while Kingfishers have decreased locally over a wide region. It is said that one Canada salmon association has been paying 25 cents a head for Kingfishers and Mergansers for the past fifteen years. Probably the shooting of Mergansers can be checked under the Convention between the United States and Canada, but this does not protect Kingfishers, as they are not migratory, game, or insectivorous birds. It is well known that Kingfishers sometimes destroy young game-fish, particularly when such fish are tame and kept in enclosed ponds, but those who pursue the Kingfisher for this reason do not take into consideration the fact that it destroys many minnows which are said to eat large quantities of the eggs of the game-fish. No doubt the Kingfisher is more or less destructive to fish in artificial ponds, but probably, in the long run and under natural conditions, it does no harm to the fish interests.

REPORT OF EUGENE SWOPE, FIELD AGENT FOR OHIO

Ohio stood still the past year in the matter of laws affecting wild life. The protectionist and an element of sportsmen had hoped to inaugurate some sort of state cat-control legislation, and the Lake fishermen intended to have the extermination of certain fish-eating water-birds legalized, but neither side introduced bills, because the reconstructive movements naturally following the armistice, and the scourge of influenza, so engrossed public attention and

shaped legislative activities that any attempt to secure laws for, or against "so small a matter as wild life" would have been in vain.

An influential class of Ohio sportsmen now favor having the state game laws conform to the Federal laws. This sentiment is gaining strength, and the former idea that Washington has no right to interfere with, or control Ohio's sporting proclivities is losing ground.

The National Association, through its years of persistent effort, is the outstanding influence that is bringing about this reasonable attitude of Federal control among all classes. The Educational Leaflets and the Junior Audubon enthusiasm invariably find their way from the school to the home, and parents are hearing so much about "not killing birds," and what would happen "if there were no birds," that the influence of these negative suggestions is finally crystallizing into a public opinion that there should be an able national control over bird welfare. This, likely, is, to the officers of the Association, an unexpected outcome of the Junior work. They probably never dreamed that its influence would be so far-reaching, yet it is wholly in keeping with the spirit of the Association's aims and purposes, and an effect that can, no doubt, be found in all states where the Junior classes have been made a strong feature.

The Junior work in Ohio suffered last winter through the closing of the schools during the influenza epidemic. Every school in the state was affected. Three-fourths were closed for a period of from four to thirteen weeks. Schools began to close the first of October, and the last to be affected did not open until March. Through this period your agent could do little more than mark time.

During the summer your agent worked as a special instructor in numerous Ohio Teachers' Institutes. This consisted in showing teachers that bird-study has a true educational value, and how to correlate the subject with certain subjects of the regular curriculum. The idea was to stimulate the organization of Junior classes during the present school year. The officers of the Institutes understood this, and likewise the teachers, and there should be an advancing of the Association's work as a result.

Throughout the year your agent has kept up the usual publicity through the newspapers, and given many lectures.

REPORT OF WINTHROP PACKARD, FIELD AGENT FOR MASSACHUSETTS

The Massachusetts office of the National Association of Audubon Societies was fortunate last May in receiving additional funds for the Junior work in this state. A three-weeks' whirlwind campaign was instituted, a general appeal to teachers by mail, accompanied by personal work among the schools by three skilled organizers. Results were excellent and immediate. Moreover, the impulse given lasted long after the campaign was finished. Massachusetts,

because of this opportunity, not only greatly increased its record of Junior bird students for the year, but because of classes coming in after the school year closed, starts the fall season leader of all the states in Junior class work. We added, during the year ending June 1, 1919, 455 classes, with 13,023 members; by the first of September, 218 additional classes, with 5,295 members, had come in. We are confident that if we could have sufficient funds for this intensive work we could hold our state's lead for the year.

In addition to the Junior work, the need of bird-protection and the value of the work of the National Association has been persistently called to the



WINTHROP PACKARD AND OFFICE ASSISTANTS. OFFICE OF MASSACHUSETTS AUDUBON SOCIETY AND THE NATIONAL ASSOCIATION OF AUDUBON SOCIETIES AT 66 NEWBERRY STREET, BOSTON

attention of New Englanders. Among other methods, some 10,500 personal letters have been sent out. The increased interest in the cause has been noticeable in many ways. Three life and 137 sustaining members have joined, dues and contributions amounting to \$1,100 being thus received.

Requests for literature, lectures, and exhibitions, and assistance in the form and care of sanctuaries and work for birds on private estates, large and small, have been numerous and have been scrupulously attended to by the staff. Legislation has been watched and no unfavorable bills have been passed.

In general, your field agent for Massachusetts has found that the persistent advocacy of bird-protection throughout New England is having steadily in-

creased results. He feels that the always prompt and generously rendered encouragement and support of the Headquarters office at New York has much to do with such success as his own efforts have met, and, assured of this support and encouragement, goes forward hopeful of increased results during the coming year.

REPORT OF WILLIAM L. FINLEY, FIELD AGENT FOR THE PACIFIC COAST STATES

The greatest blow at the conservation of wild birds on the Pacific Coast is the almost certain destruction of our two large Federal wild-bird reservations, Lower Klamath and Malheur Lakes. The destruction of Klamath Lake



**WILLIAM L. FINLEY TAKING MOTION PICTURES OF YOUNG WHITE PELICANS,
MALHEUR LAKE RESERVATION, ORE.**

Photographed by Irene Finley

Reservation has been accomplished by the drying up of the water, caused by cutting off the flow of water from Klamath River. The Reclamation Service has done this by building a dyke across the river.

Lower Klamath Lake was a stretch of about fifteen miles of open water, surrounded on all sides by miles of tule marsh. Untold thousands of Ducks, Geese, Pelicans, Terns, Herons, and other birds made this place one of the greatest wild-fowl nurseries in the United States. Because of this, President Roosevelt, at the request of the National Association of Audubon Societies, made it a national bird-reservation on August 8, 1908. It was a great living monument to his memory, but now it looks like a desert waste. To complete the devastation, fires were started months ago in the vast tule marsh. Not only the surface, but below the surface into the tule roots and the peat, the fires are burning continually.

What has been gained by the drying up of Lower Klamath Lake? The idea of the Reclamation Service was to bring irrigation water from some other place and use the land for agriculture. Examination of the soil shows that it is so filled with alkali that little or nothing can be grown, even with a great amount of irrigation.

Formerly, Lower Klamath Lake subirrigated a part of the surrounding country, producing a large amount of wild hay land. These sections have now reverted to a desert. The great bird colonies were of inestimably more value to the Pacific Coast and to the whole country than the wide alkali flats. Every person and every organization in the country should protest to Franklin K. Lane, Secretary of the Interior, to open up the dykes and restore Lower Klamath Lake. If this could be done the fires now burning in the tule marsh could be extinguished. The bird multitudes would likely return next spring to their



YOUNG EGRET IN COLONY NEAR MALHEUR LAKE RESERVATION, ORE.
 Photographed by William L. Finley

ancestral homes. If this is not done, Klamath Lake Reservation is gone forever.

The protection of our wild birds is not only a National, but an international question, in which we are bound by treaty with Canada. The real factor in conserving wild fowl is saving their breeding-places from destruction. Here is the destruction of wild fowl on an enormous scale by a department of the Federal Government. The public, as a whole, has a right to know whether the destruction of this federal wild-bird reservation, which is a great natural asset to the country, can ever be recompensed for by the effort to cultivate the alkali flats of what was once Lower Klamath Lake.

The case of Malheur Lake Reservation is somewhat the same as Lower Klamath, except that this is not a project of the Reclamation Service. Malheur Lake Reservation is in the lowest part of Harney Valley. The diversion of the

waters for irrigation purposes is rapidly drying it. Inside of three years more, this will be accomplished and the greatest Federal bird-reservation in the country will pass out of existence. An effort was made at the last session of the Oregon legislature to straighten out the Malheur Lake matter and secure its permanency as a bird-reserve, but this failed. The fight is against the prevalent commercialism that would destroy everything of beauty in the hope of turning it into money. If a sufficient fund can be raised, it is likely that a bill will be initiated to save Malheur Lake and put it up to a vote of the people.

On August 18, 1908, when Malheur Lake Reservation was created, the Egrets (*Herodias egretta*) had been exterminated by plume-hunters. In 1912, we found a small colony at Silver Lake, some twenty or thirty miles to the west. At that time, a few pairs were nesting in some willows on an island. These were the only Egrets known to be nesting in the state. Two or three years later, this lake dried up and these birds evidently went back to Malheur Lake or to a patch of willows near its northern edge.

On June 23, 1919, Mrs. Finley and I visited a small Egret colony on Malheur Lake. From a distance, we counted seven or eight of the big white birds nesting in the tules as neighbors to some Great Blue Herons. We did not go very near the colony for fear of disturbing the birds. If Malheur Lake Reservation can be maintained, these birds may grow in numbers.

On June 26 and 27, we visited a second Egret colony which is on the Island Ranch, a holding of about 60,000 acres owned by the Miller & Lux Company. South of the ranch buildings, about five and a half miles in the swamp, are two patches of willows, each of which is two or three acres in extent and about two or three hundred yards apart. There were twelve nests of Egrets in one colony and perhaps fifteen nests in the other. Most of the nests in the first patch of willows contained four young birds about two-thirds grown. Malheur's millions of birds, including Ducks, Geese, Grebes, Pelicans, Egrets, and Gulls, will soon be driven away forever unless the unexpected happens.

REPORT OF HERBERT K. JOB, IN CHARGE OF THE DEPARTMENT OF APPLIED ORNITHOLOGY

The Department has recently passed the fifth anniversary of its organization. In that time it has published the only general treatise as yet issued in America covering the whole field of applied ornithology, which includes the propagation of game-birds and wild water-fowl, and has furnished Bulletins II and III, based upon sections of the above Manual, for general distribution by this Association. It has also supplied the Association with motion pictures of wild bird-life in various phases. Inspections have been made for many estates, preserves, and public parks, and plans furnished for attracting, conserving, or propagating wild birds and game. Through the work of the Department, the National Association of Audubon Societies has secured recognition

as a pioneer and active ally in the growing movement and industry of game propagation in America, which already is producing birds and eggs by the hundreds of thousands, annually, with a large valuation. Direct instruction in practical methods has also been furnished to many inquirers through correspondence, public lectures, and articles published. Scientific research has been and is being conducted, and the results given to the public through the above channels. A large bird sanctuary, game-farm and experiment station, and a Summer School of Ornithology have been maintained.

The specially distinctive features of the past year have been the successful operation of the Summer School, experiment station, and game-farm at Amston, Conn., these features making for something tangible and permanent in the work of the Department. Attendance at the Summer School taxed the present limited accommodations at Amston, and people had to be turned away. Students came from points as widely apart as Montreal (three entries), Dallas, Texas, and Chicago. They were a talented and enthusiastic company of people, and had a happy time among the birds, with field and lake excursions, and attending public illustrated lectures given in the evening by Charles C. Gorst, T. Gilbert Pearson, and the writer. Practical instruction was given, including field ornithology, attracting birds, game-farming, nature photography with plate and motion-picture cameras, coloring lantern-slides, and



A FEW OF THE ELEVEN HUNDRED YOUNG PHEASANTS ON THE NATIONAL ASSOCIATION'S EXPERIMENT FARM AT AMSTON, CONN., BEING FED BY HEAD-KEEPER, R. K. McPHAIL

Photographed by Herbert K. Job

museum taxidermy. Without the knowledge of the Director, the students organized the "I. B. C."—The International Bird Club—to promote the future interests of the Amston Summer School, and surprised him with this at a closing banquet which they arranged.



KEEPER CALVIN McPHAIL FEEDING YOUNG DUCKS AT NATIONAL ASSOCIATION'S EXPERIMENTAL FARM, AMSTON, CONN.

Photographed by Herbert K. Job

In order to carry out plans for the Experiment Station on a larger scale, \$3,000 has been raised through the organization of The Amston Game Club, "for propagation of game and conservation of wild birds in coöperation with the National Association of Audubon Societies." The membership is composed largely of prominent business and professional men of Connecticut. The officers are: President, State Game Commissioner Frederick N. Manross; Vice-President, Col. Louis R. Cheney, ex-mayor of Hartford; Herbert K. Job, Secretary and Manager; Lewis S. Welch, Treasurer. Charles Hopkins Clark, editor of *The Hartford Courant*, is an enthusiastic member.

A year ago, Robert K. McPhail, formerly gamekeeper to the King of England was employed, and later his eldest son, Colin McPhail. These men have made a splendid record. In one rearing-field, at this writing (October 1), are over 1,100 young Pheasants of their raising, which are bringing from \$4 to \$5 each. Besides these they have also brought to maturity a nice lot of northern Bob-Whites, also California Quail, Ruffed Grouse, Mallards, Black Ducks, Wood Ducks, and Mourning Doves. Among all these birds during the entire season

there has not been a single outbreak of disease. Until sales are complete we cannot know the exact money value of this feathered "crop," but it promises to be considerably over \$4,000, with a total acquired property of about \$5,500.

One of the delightful features of this work is in extending the courtesies of the National Association of Audubon Societies to visiting bird-lovers, and giving them a novel good time. The birds' evening feeding at 5 o'clock has become almost a theatrical event. Yesterday there was quite a throng of visitors who came by automobile from Hartford and other places. The day before, a delegation from the Hartford Bird Study Club, out on our beautiful lake, went almost wild with excitement, seeing for the first time in their lives some Double-crested Cormorants which had dropped in on their migratory flight.

Experiments are under way in systematizing practical methods for the Propagation of Quail and Grouse on a larger scale than heretofore. A monograph detailing new methods for breeding the Ruffed Grouse has been prepared for the New York State Conservation Commission, and will shortly be published. A similar one on larger production of Quail is also planned. Song-birds have not been overlooked. More and more do they flock to our bird-boxes, and the large tract abounds with them. At our tupelo or sour gum trees, in autumn, with their wealth of small berries, one may watch a varying host of small birds the livelong day. Check is kept on the enemies of birds.

Some additional motion-picture films and plate photographs have been taken for the Association. Arrangements have been made with the Chester Outing Pictures management to use parts of the Audubon films for world-wide distribution and already two have been issued—"Teddy Birds," and "Where the Screen-Tree Grows," with credit given in title to this Association. A film featuring "John Burroughs, the Naturalist," has also been taken for the above company. The other work of the Department progresses normally.

REPORT OF ARTHUR H. NORTON, FIELD AGENT FOR MAINE

Early in January, 1919, the state legislature was convened, and held in session through the last week of April. Considerable time and effort were necessary to secure information concerning numerous bills referred to various committees and to see what they contained that might have a bearing for good or ill upon birds, or affect to their detriment the lands supporting large colonies of them. Happily, nothing of a retrogressive nature was attempted.

A helping hand has constantly been extended to the local bird societies, to the Grange, and to schools, through illustrated talks, and advice.

Inspection of the colonies of birds within twenty miles of Portland were made and all found to be in excellent condition. The colony of Herring Gulls within this radius (reported last year) showed a substantial increase; Roseate

Terns were found to be breeding and to have increased in numbers. A nest of the Piping Plover was found—the first for many years—located within a popular seaside resort, and the young were hatched and, no doubt, raised.

It was very gratifying to find among the summer residents at the place a deep solicitude for the success of these charming birds and even to be warned that the birds must not be troubled. The harbor seals, which a few years ago were nearly exterminated through a bounty placed upon them, showed within this area a decided increase, and the animals very tame. One of the colonies, abandoned two years ago, was found reoccupied by a herd of upward of fifty



LUNCHTIME ON BLUFF ISLAND BIRD RESERVATION, MAINE. ARTHUR H. NORTON
AND ELIZABETH PEARSON

Photographed by T. Gilbert Pearson

seals. The year has witnessed an increased interest in bird-study, and this has been shown by an increased membership in the several societies in the larger centers of population, and of bands of observers in the smaller places.

REPORT OF MISS FRANCES A. HURD, SCHOOL AGENT FOR CONNECTICUT

The past year I have again represented the National Association in the organization of Junior Audubon Classes in the schools of Connecticut. Owing to various drives and the influenza epidemic, the Junior Audubon work in the state made very little headway before spring, when it started up with unwonted

activity. During the school year there were organized 486 classes, with a membership of 13,156, which is the largest yearly record thus far attained for the state. Your agent visited many schools during the year and gave 116 talks to 20,000 children.

Several hundred letters sent out to teachers and superintendents of schools, and a questionnaire mailed to the latter, brought most gratifying results, showing marked interest in and a willingness to coöperate with the Audubon work. The State Board of Education distributed many of our announcements and Meadowlark leaflets, and the Secretary wrote: "I wish we might see an Audubon Society in every school." The purchase of bird books, charts, and extra leaflets by many classes, and the following extracts from letters, indicate the increasing interest in bird-study.

One teacher wrote: "My children have become so enthusiastic over forming a Junior Audubon Class that already we have 43 members and other clubs are being formed in the school." Another: "So many of the children outside of my room wanted an Audubon Society that the principal has consented to take them. I felt I could not handle eighty children in a bird-walk, so we are going to work together with them. We have been on two bird-walks already." A small country school reported: "We are now a 100 per cent Junior Audubon Class. We have weekly meetings and love our Club."

The Neighborhood Nature Club of Westport ably assisted in organizing Junior Classes in their schools. Committees were appointed to precede me in visits to the schools to tell the pupils of our work. The results were splendid, for over half of the students in the grammar grades became members.

Arbor Day I spoke at the exercises of one of the Stratford Schools. As I stood before the audience, many Junior members were discovered, as they proudly pointed to their Audubon buttons. While talking to a class in one of the New Haven schools, the pupils were delighted when I spied their pet Robin on her nest in a nearby tree. For many it was their first opportunity to watch a bird build a nest. In another school I found the teachers taking their children out during the spring migration to see the Warblers that were busy at work among the trees, and several species were identified.

My summer vacation, spent in Buck Hill Falls, Pa., gave me an opportunity to do a bit for the Audubon cause. The Nature Club there distributed our leaflets to the children of the Club, who represented several different states, and all were eager to start Junior Classes in their home schools. The Club invited me to assist them in preparing an exhibit for the Barrett Township fair which is the event of the season at Buck Hill. Our booth proved popular and many visitors stopped to read the literature that we offered them. Then followed an invitation to speak to the teachers of the township, and all expressed willingness to advance our cause for bird-protection.

REPORTS OF AFFILIATED STATE SOCIETIES AND OF BIRD CLUBS

REPORTS OF STATE SOCIETIES

California.—Last June we held our thirteenth annual meeting. The secretary's report at that time showed that bird-protection work had been carried on in the usual manner, lectures being delivered, leaflets sent out, information given, and violators of the law punished. It being legislative year, our efforts were directed toward warding off adverse legislation. To this end we published Leaflet No. 10, giving testimonials from ranchers in the grain-growing parts of the state regarding the value of Meadowlarks and Blackbirds, as well as those about the Flicker, which has been accused of destroying farm buildings. These splendid testimonials were collected two years before by our representatives, John D. Frederick and Mrs. Adele Lewis Grant. This leaflet was sent to all our legislators and leading newspapers at the beginning of the legislative session, and, for the first time in twelve years, no bills against the Meadowlark were introduced. The other non-game birds were also not mentioned, except that several of them were placed in bills that proposed to put bounties upon them and certain animals. Other unfavorable bills aimed to drain certain lakes that are breeding-places of our wild fowl, and repeal the hunting license law. However, there was enough opposition to prevent these bills getting far, and we feel that our thirteenth year was not an unlucky one.

Leaflet No. 6 containing a digest of the state bird law, was revised and brought up to date in state and Federal regulations. This has been widely distributed.

As Chairman of Birds of the General Federation of Women's Clubs, the secretary compiled a leaflet of "Suggestive Bird Programs," with splendid bibliography, for use in the various states in the Union. This leaflet has been published in the *General Federation Magazine* and, because of this and a notice given it by BIRD-LORE, has gone into many homes in every state. Requests for these programs are continually coming. With this leaflet are sent many of those of the Audubon Society, so that the knowledge of our work is also spreading throughout the country.

An appeal was made for subscriptions for the Roosevelt Memorial Bird Fountain, and many circular letters were sent out, as well as personal appeals given. The response was fairly good, considering the many demands that have been made upon the people the last two years. All seemed in sympathy with the idea. Our director, Mrs. George W. Turner, is in charge of the Bird Work for the Southern District of Women's Clubs, which comprises about six counties, and is doing splendid work, using slides for her lectures. In the Los Angeles

District, comprising about the same number of counties, Mrs. F. T. Bicknell (President of the Los Angeles Audubon Society) has been bird chairman and done equally good work.

The repeated requests for information and leaflets coming to us from educators, librarians, rural school teachers, as well as bird-lovers, assures us that our work is well established. (Mrs.) HARRIET WILLIAMS MYERS, *Secretary*.

Colorado.—The regular monthly meetings, that were interrupted last fall by the influenza, have started this fall with a promise of greater enthusiasm for bird-study than ever before. The monthly lecture by the secretary will be followed by round-table discussion, questions, experiences, and other informal intercourse. Field-trips, as in the past, will furnish inspiration for closer study of birds and broaden the sympathies of the participants. Experiments in bird-boxes, feeding-trays, and bird-baths have been successful and of much value to the owners, as well as a convenience to the birds.

Much has been done to encourage Junior Audubon Societies, and the increase in numbers from 48 to 70 is but the beginning of what we may expect this year. Forty-three of the Club bird-slides were loaned to the State University for extension work throughout the state. Other slides were used by Dr. Bergtold to illustrate his lectures at the Recuperation Camp and by several teachers with their clubs in the schools. Bird-slides, charts, pictures, mounted birds, and stuffed skins have been used by the secretary in her various lectures before the Denver Supply Teachers, the P. E. O., the Colorado Daughters, Denver Woman's Club, Y. W. C. A., the Boys' Division of Y. M. C. A., Olinger's Highlanders, the Denver Horticultural Society, and the course of ten lectures given to the Denver County Teachers' Institute.

The attempt to get a bill, like the New York law compelling cat control, through the legislature failed. May a wider education along the line of bird mortality caused by cats reap success at the next session. Dr. Arnold has continued his bird hospital. Mr. Warren is a center of bird activities in the Colorado Springs district, not only as president of the Colorado Audubon Society, but also as chairman of the Pike's Peak Division of the Nature Protection Committee of the Colorado Mountain Club. In fact, nearly every member is a nucleus of group activity for study and protection of birds. That we have the coöperation of many other clubs is not strange, as our members include the president of the Burroughs Nature Club, the chairman of the Conservation Committee of the Colorado Woman's Clubs, chairman of the Bird-Study Class of the Colorado Mountain Club, and chairman of the Nature Protection Committee, Denver Region, of the Colorado Mountain Club. That many classes of people are interested in birds is plain when one considers the various organizations that have called upon the secretary for lectures.—(Miss) HATTIE E. RICHARDSON, *Secretary*.

Connecticut.—The Connecticut Audubon Society sends greetings to its fellow workers and announces that it has, by standing very pat, survived the war and the *Great Hoover Canning Period* without itself becoming a victim of the process!

Though we have held fewer Executive Committee meetings than usual—five only—we have never lacked a quorum and have handled a normal amount of business. As we were beginning to think that song-bird protection was thoroughly understood in the state, some of the most flagrant destruction of protected birds has come before us this fall, so that the cry, with renewed vigor, is, "Carry-on." Two more traveling libraries have been sent out, also a lecture with colored slides and fifty Audubon Charts have been added to our equipment.

Over 7,000 people have visited Birdcraft Museum. On the Sunday afternoon before this report was written, 180 people visited the Museum, 85 of these being men. We are always trying to broaden our perspective and co-operate with those who are working along similar lines, though from a different viewpoint—I mean the true sportsmen who in their turn are becoming more and more practical allies of song-bird protection.

When, two years ago, a bill was passed in the Connecticut Legislature placing all but five of the shore- and upland game-birds upon the protected list, much honest confusion arose among the younger sportsmen, who wished to keep the law, but were rather weak about the identity of certain of the smaller birds. To meet this, all such men were invited by the Game Warden of Fairfield County (also one of our Executive Committee) to freely visit Birdcraft Museum, where the keeper has arranged these birds in such a way that they may be studied, both in their habitat groups and close at hand.

Many sportsmen availed themselves of this opportunity as soon as the season opened, ten having come in a single day. The Fish Hawk, or Osprey, too often mistaken for one of his detrimental kinsmen, is also an object lesson of the Museum, which place, owing to the Warden's ability to constantly adapt the exhibit to special needs, is becoming an educational factor in the state.

Miss Belle H. Johnson, inspector of our libraries, makes the following report of the use of our traveling material, supplied by us for circulation through the State Board of Education.

For the year ending September 1, 1919, 173 Audubon Bird Charts were circulated. Sixty-six of our libraries were in use, mostly in country schools. A total circulation of 1,666 volumes was reported. The average number of books circulated in each school reporting was 34. Twenty-six portfolios of bird-pictures and 33 collections of mounted post-cards were sent to schools.

The bird lectures were used thirty-eight times, the total attendance being 6,087. The lectures were given by Sunday-schools, Junior Audubon Clubs, science classes in high schools, private schools, libraries, Christian Endeavor Societies, community improvement associations, boys' departments of the

Y. M. C. A., and at the Father and Son Gatherings of the Y. M. C. A. One school superintendent borrowed all of the lectures during the year, using each one three times in the two towns which he supervised. All of the loans show an increase in circulation over the previous year.—(Mrs.) MABEL OSGOOD WRIGHT, *President*.

District of Columbia.—Our twenty-second annual meeting was held on the evening of January 28, the anniversary of Prof. W. W. Cooke's birthday, a day we are always glad to remember. Dr. A. A. Allen, of Cornell University, was the speaker of the evening, giving us his delightful, illustrated lecture on "The Warblers." Another evening was spent at the Congressional Library, looking over the large edition of Audubon's books, Dr. T. S. Palmer calling our attention to many points of special interest in connection with different pictures. Still another evening was spent at the Chevy Chase School examining Dr. Prentiss' collection of bird-skins; this, I think, is the earliest collection made in the District of Columbia.

Mr. Shiras was anxious to have our Society undertake the regular feeding of the Pigeons in one or more of our Public Parks as a memorial to ex-President Roosevelt. This we have been striving to do. With the coöperation of some of the supervisors and superintendents of the schools, we are trying to arouse our school board to the importance of systematic bird-study in at least the fourth, fifth, and sixth grades. The Chief of Police, Major Pullman, being one of our vice-presidents, we were able, with his help and that of some of his aids, to feed the quail in some of our outlying districts and thus preserve them during the winter.

On Decoration Day a number of us visited the graves of some of the ornithologists buried in the various cemeteries about Washington, and, owing to the indefatigable zeal of Dr. Palmer, Mr. Jouy's grave was located. Mr. Jouy made the second list of the birds of the District of Columbia.

We had our usual five study classes, with as earnest a group of workers as has ever attended. The average number present was fifty-eight. These were followed by six delightful field meetings and 105 persons went on the walks and 120 varieties of birds were seen.—HELEN P. CHILDS, *Secretary*.

East Tennessee.—Our most effective work is done at the Farmers' Convention in May and the East Tennessee Division Fair, usually held the second week in October.

The accompanying photograph shows our latest exhibit, as conducted by two gentlemen, Rev. McDonald and R. T. Aiton, and two ladies, Mrs. Walter Barton and Mrs. Karl E. Steinmetz.

Through the kindness of a friend we had loaned to us a number of mounted birds and a terra-cotta bird-bath. Mrs. Barton had some feeding-trays and bird-houses made. She also demonstrated winter feeding by showing how to

put up beef suet and different grains. Assisted by Mrs. Steinmetz, she obtained 45 pledges aggregating 5,700 acres for bird sanctuaries.

One school day these workers met at least fifty school teachers to whom they distributed the literature you sent us and obtained their promise to



EXHIBIT OF EAST TENNESSEE AUDUBON SOCIETY, KNOXVILLE, OCTOBER, 1919

organize Junior Audubon Societies. Mr. Steinmetz had printed 300 posters which were given to the farmers who would post their land.—(Miss) MAGNOLIA WOODWARD.

Illinois.—During the year the number of new members almost doubled the number of delinquent members, and their dues paid exceeded delinquent dues by considerably more than five times. Last December, Roy M. Langdon, a director of the Society and Secretary of the Maywood Bird Club, was elected secretary-treasurer, succeeding Mrs. Bertha Traer Pattee who had served the Society as secretary most faithfully and effectively for five years. It was her hope, as it was the hope of her fellow-directors, that it would soon be possible for Mr. Langdon to devote all his time to Audubon work. Orpheus M. Schantz and Jesse L. Smith succeeded themselves as president and vice-president respectively.

The state legislature being in session, the Society made the winter (1918-1919) issue of its magazine, *The Audubon Bulletin*, a conservation number, devoting it almost entirely to propaganda in behalf of wild life and kindred sub-

jects. Among the 2,000 persons receiving this issue were the legislators and the employes of the Division of Game and Fish, Illinois Department of Agriculture. Jesse L. Smith contributed a very able article on "Bird Protection in Illinois," setting forth the Society's wishes in regard to the new game and fish code which was then being framed. As a result of this and activities following it, the Division of Game and Fish asked the Society's secretary to submit in writing provisions the Society desired incorporated. It is gratifying to report that the new code, effective July 1, meets most of the Society's wishes, embodying in places the wording as submitted.

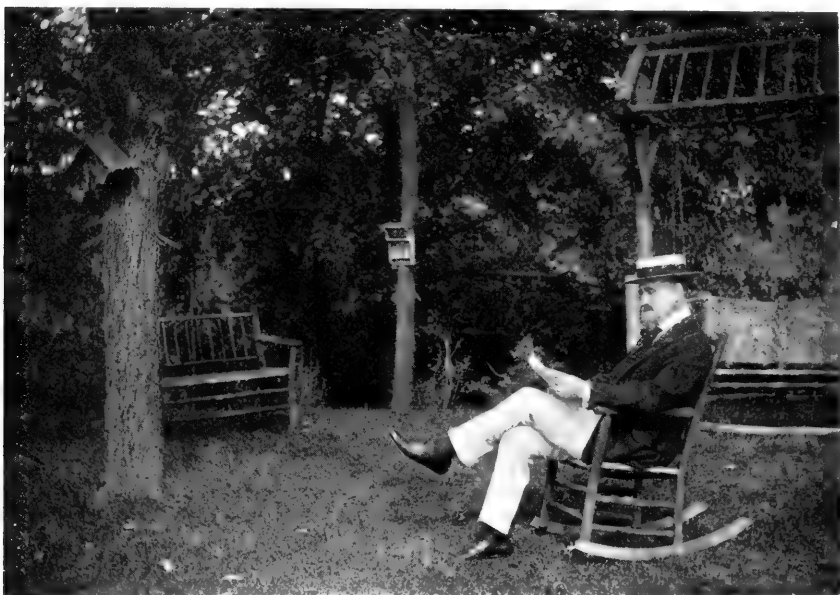
In the new code, the Illinois Audubon Society inserted the words "or attempt to shoot, kill, destroy, or catch," in the provision protecting non-game birds. It provides for the protection of Sparrows and Finches, inadvertently omitted from protection by Federal regulation under the Migratory Bird Treaty with Canada. The Society substituted for the words, "Chicken Hawk" in listing outlaw birds, the specific words, "Cooper's Hawk, Sharp-shinned Hawk, Goshawk, Duck Hawk, Pigeon Hawk;" specified only the Great Horned Owl; and listed, the English Sparrow, Crow, Blackbird, Blue Jay, and Cormorant, as the other non-protected species. We suggested that no hunting license should be issued to any person under eighteen years of age. The law as passed reads "—no person under the age of sixteen years, without the written request of the father or mother or legally constituted guardian of such person." We objected, with others, to giving hunting rights to foreign-born, unnaturalized persons, and advocated favoring citizens of Illinois more than citizens of other states coming to Illinois to hunt. These points are covered in the new code. Also, we advocated, with others probably, the provision giving the same fees and mileage to sheriffs, deputy sheriffs, constables, and other police officers making arrests and serving warrants under the code, as the old law gave to constables only, and also giving one-half the fines imposed and collected in cases where said officers have filed complaints. These are provided.

In this issue of *The Audubon Bulletin*, the Society took sharp issue with the DuPont "National Crow Shoot" campaign. It was gratifying to note that T. Gilbert Pearson, in *BIRD-LORE*, May-June, 1919, opposed the campaign with even greater force. Robert Ridgway, dean of American ornithologists, made a strong plea for game and forest preserves in southern Illinois; H. C. Norcross, editor of *The Illinois Sportsman*, forcefully advocated game preserves; and Mrs. Rebecca H. Kauffman again urged that the white pine forest of Ogle County be made a preserve. In a strong editorial, Jesse L. Smith sharply criticized departments of our state government concerned with conservation of natural resources and made constructive suggestions.

The Illinois Audubon Society believes that a most effective means of creating public sentiment in favor of bird-conservation—and sentiment is more powerful than the law—is afforded in the Junior Audubon Classes of the National Association of Audubon Societies. It therefore is glad to report

organizing thirty-one of these classes with an enrollment of 647 children. Of these we have record. There are indications that more than as many again were organized and enrolled directly with the National Association of Audubon Societies as a result of our efforts. Our Society hopes that coöperation along this line can be extended.

The third spring lecture course, held in Central Music Hall, Chicago, on Saturday mornings in April and May, was well attended. Jack Miner, of Ontario, spoke on "Our Birds, Their Value and Intelligence;" Norman McClintock on "American Bird Life in Motion Pictures," including his studies of the Heath Hen and the Brown Pelican; and W. D. Richardson, on "Birds Here at Home."—ROY M. LANGDON, *Secretary*.



MR. FRANK C. EVANS, SECRETARY INDIANA AUDUBON SOCIETY, ON THE GROUNDS OF HIS ESTATE AT EVANSVILLE, IND.

Indiana.—Last May, at our convention, a motion was carried to write to you and inquire about having literature printed which might be read by children of the third and fourth grade schools, and also have a set of bird pictures accompany this literature. We have a new secretary, Frank Evans, of Crawfordsville, Ind. He is fine, and I am hoping his enthusiasm will stir this Society to greater and larger membership. Our new president is Prof. M. L. Fisher, of Lafayette, Ind. Our treasurer is Mrs. Nora T. Gause, of Kokomo. Stanley Coulter (former president for five years), is chairman of the Executive Committee. We created a new office, that of honorary president. William Watson Woolen is the first to be elected to that office.

We have had over a thousand students at the Teachers' College of Indianapolis this year. Most of these studied birds and used bird pictures and leaflets as aids to identification. Many of them are teaching and carrying the gospel of bird-study and bird-protection into their schools.—(Miss) ELIZABETH DOWNHOUR, *ex-Secretary*.

Kentucky.—We have little new activity to report. During the year the Society has grown somewhat, the membership has evinced a quickened interest, and there has been a larger attendance in our series of bird-walks. We have maintained several feeding-stations in our beautiful Lexington Cemetery, which is a bird-sanctuary.

Perhaps our most valuable work lies in the series of prizes we offer each year in each of our public schools where manual training is taught, for bird-houses (feeding and nesting), and for reports upon their use. Also the work done by some of our teacher members in forming and instructing Junior Classes is invaluable.—EUGENE SIMPSON, *Assistant Secretary*.

Massachusetts.—The varied activities of the Massachusetts Audubon Society have been diligently pursued and increased during the past year. Our office, which we occupy jointly with the National Association, has sent through the mails over 66,000 circulars calling attention to our work. We have added to our roll 18 life members, 340 sustaining members, and have received contributions totaling \$458, yet our opportunities for good grow as we use them, our greatest present need being increased income.

The work at the Sharon Bird Sanctuary has gone steadily on. Since the beginning of the year there were 1,150 visitors from 101 different cities and towns, twelve states, including Colorado and California, being represented, besides two provinces in Canada. This season 100 species of birds have been recorded there, 63 species nesting. Altogether, 300 nests have been under observation on the grounds, and 1,200 young birds have reached maturity there. Of these 50 were young House Wrens—most unusual for eastern Massachusetts.

Our annual Bird Day was held there May 17, some 200 members and friends of the Society being present. Speakers at the formal meeting were Edward Howe Forbush, president of the Society, and Edward Avis, the bird mimic. The exercises included a conference of the local secretaries representing various towns throughout the state, which was helpful and well attended. *The Monthly Bulletin* of the Society entered upon its third year. It conveys to all members information concerning the work of the Society and is much sought for among bird-lovers outside of the membership because of its chronicles of unique and interesting facts and experiences in the bird-world.

The Society's charts, calendars, traveling exhibitions, traveling lectures traveling libraries, bird-books, bird-houses, leaflets, and bird-protection mate-

rial in general have been in increased demand. Our annual Tremont Temple Lecture Course, now a recognized Boston institution, after the manner of the Boston Symphony concerts, was attended by about 1,500 people. The lecturers were Prof. Dallas Lore Sharpe, Clinton G. Abbot, Norman McClintock, William L. Finley, and Edward Avis.

The office continues to be the New England headquarters for information and assistance in all matters pertaining to bird-protection. Our Society works ceaselessly for the public good and greatly appreciates the public interest in and good will shown toward the good cause of bird-protection. We mourn sincerely the death of William Brewster, which occurred at his home in Cambridge, July 11 last, in his sixty-ninth year. Mr. Brewster was one of the founders of the Society and was chosen first president at its organization in 1896. Mr. Brewster was the most eminent of New England ornithologists, and his death leaves a keen sense of loss among the directors of the Society with whom he worked faithfully for the cause of bird-protection for so many years.

—WINTHROP PACKARD, *Secretary-Treasurer*.

New Hampshire.—During the year the secretary has given forty-five lectures and addresses, the majority of them illustrated. Invitations to deliver addresses have come from all over the state. These included Boy Scout groups, schools, churches, Red Cross units, summer institutes, granges, fish and game commissioners' meetings, legislative hearings, and annual field days. Every invitation has been accepted.

A strong effort was made to secure the passage of a cat-license bill at the last legislature. The House Committee reported the bill favorably, but the measure suffered defeat. A wide correspondence has been maintained. We receive letters about all sorts of things, asking for the identification of birds, winter-feeding, bird-fountains and-baths, nesting-boxes, sanctuaries, cats, game-birds, and a score of other things. These letters are all sympathetically considered and answered.

Much literature has been distributed by hand and through the mails. A special leaflet, "Facts about Cats and Birds," and several others have been issued. The secretary, Rev. Manley B. Townsend, who has been with the Society since its organization and has done most thorough and efficient work, accepted a call in his pastoral work, at Attleboro, Mass., on September 1 of this year. His removal from the state caused his resignation as secretary, which was regretfully accepted by the directors. George C. Atwell, of Stratford, N. H., was appointed secretary, and the office is now located at that place. The secretary has a tract of land on the shores of a most attractive lake, which he intends to use for a bird sanctuary, demonstration, and feeding-station. It is ideally located for the purpose, with an abundance of bird-life, both land and water, frequenting it as their natural habitat. With adjoining property intended to be included in the reservation, the tract will comprise several hundred acres. This will enable the New Hampshire Society to accomplish

more in the practical demonstration line than hitherto. We now have 800 members, with hopes and ambitions for a large increase in membership during the coming year.—GEORGE C. ATWELL, *Secretary*.

New Jersey.—The final year of the war and the commencement of the reconstruction period brought reduced financial support for the Society, and necessitated curtailment of some of its activities. Members and friends have recently responded generously to immediate needs and very good prospects seem assured. Total receipts of the Society for the year past amounted to \$5,516.82, including balance on hand at commencement thereof; total expenditure \$4,153.13, leaving a balance on hand of \$1,363.69.

In the fields of lectures, newspaper work, and legislation the Society has maintained its customary activity. In school-work it commenced the school term with the handicap of an insufficient balance of leaflets used the year before, notwithstanding which fact 315 School Bird Clubs were organized, with a total membership of 4,953, before exhaustion of leaflets compelled suspension of the work.

The ninth annual meeting was held in Newark, October 14, 1919. The business session and that of the Board of Trustees were held at the Newark Free Public Library, the former at 4 P. M., the latter immediately following, both enjoying a good attendance. In the absence of the President, Dr. Frank M. Chapman presided at both. The Board of Trustees was unanimously reelected with the exception of Mrs. Walter D. Ferres, who withdrew her name from nomination in favor of S. R. Glassford, also of Ridgewood, who was elected to succeed her. John Dryden Kuser was elected President, W. DeW. Miller, Vice-President, and Beecher S. Bowdish, Secretary-Treasurer.

At the public session in the evening, in the auditorium of the Burnet Street School, Norman McClintock, of Pittsburgh, well known as one of the most successful motion-picture photographers of birds in the country, delighted members and guests with four reels of his remarkably fine motion pictures of wild birds.—BEECHER S. BOWDISH, *Secretary*.

Ohio.—The Society has just completed a most unique year, for although there were few meetings held, due to the ban on public meetings of every kind because of the spread of influenza, yet, in point of numbers, there was a greater work done in the dissemination of an appreciation of bird-life than in many previous years' experiences. Since "all's well that ends well" the year just passed has proven most satisfactory.

The new features of the past year were the two evening gatherings, the one, a display of motion pictures at which some 1,200 people were present, and the charming entertainment given by Edward Avis (of Enfield, Conn.) on April 11, when more than 2,000 people listened in hushed attention to his inimitable recital. The members of the Society deemed it advisable to change the fiscal

year of the Society, and the annual meeting, with election of officers, occurs in May instead of October, with the hope of having the program well in hand at the opening of each year's meeting.

The following officers were elected for the coming year: President, William G. Cramer; Vice-President, Dr. Eugene Swope; Honorary Presidents, Charles Dury, Dr. Randall Condow, and Dr. F. W. Langdon; Secretary-Treasurer, Miss Katherine Ratterman. The Board of Directors has been enlarged and now consists of twenty-one interested and able members.

There is every prospect that the coming year will be profitable as well as enjoyable to all who participate in its meetings.—(Miss) KATHERINE RATTERMAN, *Secretary*.

Oregon.—The work of this Society for the year has been of the usual character, active in whatever direction our energies seemed most needed. Public opinion has taken us and our activities into its kind graces in such a manner as to assure us a generous hearing whenever we wish it. From October 1 to June 1 there were weekly talks and lectures, with slides and moving pictures, given in the hall of our central library. These meetings were very popular, never failing to bring out a large audience, and are to be continued another year. Our Junior Audubon work, under the direction of Mrs. Mamie Campbell, reports the formation of 79 Junior Societies with a membership all told of 1,325 children. We appreciate to the full the necessity of work with children and hope to enlarge our Junior work the coming year.—(Miss) EMMA J. WELTY, *Secretary*.

Rhode Island.—On account of the many and unusual demands which the war made upon our members and officials, and upon the teachers and others who coöperate with us, the work of the Society has, undoubtedly, suffered. The number of new Juniors has been the lowest recorded for some time. The circulation of books from the Society's library has, likewise, been at a relatively low figure, though the record for the year shows:

Circulation from Museum 2,594, Books 426, Among 120.

Circulation of Traveling Library 876, Books 129, Among 405.

The report, therefore, for the past year consists in the statement that the Society has marked time and has made every effort, consistent with existing conditions, to keep alive the interest in the bird-life of the state. The coming year should bring with it a reawakening of interest in bird-life, and the Society is planning to stimulate this interest through its Junior work and its circulating library.—H. L. MADISON, *Secretary*.

Utah.—The Utah Audubon Society has been organized but one year; and its activities can be measured, not as a whole, but by the efforts of its individual members. President J. H. Paul, as Professor of Nature-study in the Extension

Department of the University of Utah, has traveled over the state, giving lectures in many remote towns, ever spreading the propaganda of bird-conservation, and especially endeavoring to educate the farmer upon the subject, "Which Are the Hawks Helpful to Man?" Vice-President Nephi Reynolds, as a scout master, has taken the boys on many hikes afield, guiding them in bird-lore. Mrs. A. O. Treganza, Secretary, has given series of lectures in the grade schools, several on economic ornithology, others on the nesting ways and habits of Utah birds.

The estate of G. R. Walker, an Audubon member, has been dedicated a bird-sanctuary. Here, on forty acres of almost virgin woodland, the birds find a real paradise. During the winter, suet-baskets are hung in the trees, and feeding-tables are maintained, upon which is served delicious, big sunflower seeds, raised especially for the birds. Bathing-pools and nesting-boxes are also provided. A. O. Treganza and A. D. Boyle have also lectured in behalf of bird-conservation. Contributions to the daily papers on the "Economic Importance of Birds" and "The Domestic Cat as an Agent of Destruction" awakened much interest throughout the state.

Many Audubon Educational Leaflets were distributed. Regular meetings were held from September to June, on the second Wednesday of each month. Among Utah's wonderful natural resources, her birds stand foremost. The education in bird-lore progresses very slowly, but we hope that unflinching faith and patient, well-directed effort will very soon awaken in Utahans an appreciation for their feathered benefactors.—(Mrs.) A. O. TREGANZA, *Secretary*.

REPORTS OF AFFILIATED ORGANIZATIONS

Audubon Club of Norristown (Pa.).—This Club, organized on March 27, 1911, has had a very interesting year. While we meet only four times annually, we usually make up by having extra-good lectures, lantern-slides, and moving pictures. On March 6, Edward Swayne gave his delightful lecture, "The Birds and the Poets," showing how much of the poetry and prose of all ages has been attributed to birds. On Decoration Day, May 30, a large number of members enjoyed the annual pilgrimage and field-day to Millgrove Farm, Audubon, Pa., the former home of John James Audubon, through the courtesy of Mr. William H. Wetherill, owner of the farm and life member of the Club. At our June meeting, Dr. Silas A. Lottridge entertained the Club with his lecture, "Our Friends in Feather and Fur." During the nesting season much interest was taken in nesting-boxes and many were erected by our Junior organization. Our fall meeting in September will be remembered by the Club members as the largest we ever held. Owing to the Teachers' Institute, which brought to our town several hundred teachers from all over the county, we had a banner attendance. The speaker was Herbert K. Job, who delighted the Club with a

beautiful lecture on "Hunting Wild Birds with the Camera." This was also accompanied with several reels of the National Association's moving pictures. In December we have the annual business meeting and give our own members a chance to "speak for themselves." This meeting brings out local experiences which tend to develop a growing interest in bird-study.—(Miss) HELEN A. BOMBERGER, *Secretary*.

Buffalo (N. Y.) Audubon Society.—Our Society celebrated its tenth anniversary in June by a week-end trip to beautiful Glen Iris, on the Genesee River. Ten interesting Saturday afternoon trips were led by the president, Edward C. Avery, during the migratory season. For the fifth consecutive year we issued a Bird Almanac. One thousand copies were printed and a considerable sum added to our treasury. Articles of bird interest were published throughout the spring months in the Buffalo *Sunday Express*. As a Society we contributed to the Roosevelt Memorial.

A number of members enjoyed feeding the Chickadees, Nuthatches, and Woodpeckers in Delaware Park during the winter. The Chickadees were so tame that they fed from the hand. "High Dive," the name given an adventurous Red-headed Woodpecker, the special pet of a member of our Society, has returned to the same location for the second year. He amuses spectators by diving from a tree and catching nut-meats thrown up to him.

We are planning to place feeding-stations in each of the large parks, also to feed the Gulls on Niagara River this winter. An important aim of our Audubon Society is to have a bird-sanctuary near Buffalo.—(Mrs.) C. M. WILSON, *Secretary*.



MR. EDWARD C. AVERY,
PRESIDENT BUFFALO AUDUBON SOCIETY

Burroughs Junior Audubon Society of Kingston (N. Y.).—The past year our aim has been to know intimately a few of our common birds. To this end we made several field-trips and at each monthly meeting papers on two of the listed birds were given, while cards and colored slides were shown. As usual the

Bird Club held appropriate exercises in Chapel on State Bird Day. One of the members brought us a Great Horned Owl which her brother shot after several choice ducks had been devoured. The bird was mounted, the Board of Education and the Club sharing the expense.—(Miss) ELIZABETH BURROUGHS, *Secretary*.

Cayuga (N. Y.) Bird Club.—Practising its wartime economy another year, the Cayuga Bird Club made no special effort to obtain funds, but contented itself with small services in behalf of the birds. Several feeding stations were maintained in the Club's bird-sanctuary, and an increasing number of them were kept up at the schools and at private homes throughout the city.



BIRD-HOUSES MADE BY CHILDREN OF ITHACA, N. Y., IN CONTEST HELD BY CAYUGA BIRD CLUB, 1919

In the spring the Club announced a bird-box competition for the school children. The boys took part with great enthusiasm, about 100 very good boxes being entered, and suitable prizes of various kinds of tools were awarded. The boxes were placed on exhibition in the assembly hall of the high school, and the presentation of the prizes formed the main exercise of a convocation hour. This year the children kept their boxes to put up at their own homes, and the Bird Club has heard that a good percentage of them were tenanted.

As usual, the early Saturday morning field-trips were held for the general public during April and May. There were several leaders, each of whom took a small section, so that everyone could enjoy the migration to the full. A new feature of our work this year was the planting of about 500 red

pinus and Norway spruces in the sanctuary. These trees were donated by the Department of Forestry, at Cornell University, and were especially appreciated because the sanctuary, being a bottomland forest, formerly had no evergreens. The planting of the trees was made the occasion of a field-day for the schools, and the children themselves did the work under the supervision of their teachers and members of the Bird Club.

This year, again, the Bird Club is to have the privilege of hearing many leading ornithologists who are coming to Cornell in connection with the course in wild-life conservation.—A. A. ALLEN, *Secretary*.

Cocoanut Grove (Fla.) Audubon Society.—We can report good work along every line, especially with the children. The president reports finding a Bridled Tern in the Hammock Shore of Biscayne Bay, that had been blown ashore during a storm. This bird has only been reported once before in Florida, according to Chapman. It was not injured and was returned to the water by Kirk Munroe. The bird's home is the Bahamas. Two Black-billed Cardinals have been seen and fed for more than a week at a bird feeding-station. They came with other Cardinals. They are rare, and our bird books do not tell us of them. Why? Early in September a flock of Roseate Spoonbills was seen flying southward from Cocoanut Grove. None of these birds has been seen here for over twenty years.

We have established an Audubon shelf in the Cocoanut Grove Library that is proving very useful. No aigrettes or other wild-bird feathers are now seen on hats here. The Society succeeded in having Cocoanut Grove made a bird-sanctuary according to law, and the mayor of the town has offered a prize for the best bird-work done by boy or girl belonging to the juvenile class of our Society.—(Mrs.) KIRK MUNROE, *President*.

Columbus (Ohio) Audubon Society.—Two lectures, two social meetings, one juvenile program, and thirteen field-trips constitute the activities of the Columbus Audubon Society for 1918-1919. Contributions were made as follows: \$5 to the Roosevelt Memorial Fountain Fund; \$6 to the New York Bird and Tree Club to plant trees in devastated France. In October, George L. Fordyce, of Youngstown, Ohio, a well-known ornithologist, lectured, particularly interesting the audience with his pictures of water-birds. No meetings were allowed in November or December on account of the "flu" epidemic. In January the State Board of Agriculture joined with the Society in bringing Herbert K. Job, with the National Association's wonderful moving-pictures, to Columbus. Over sixty state game-wardens attended the lecture.

The main social event of the year was a unique bird party, for which the Morrey School of Music gave the use of their house. The young people gave bird charades and the older people went about with the name of a bird pinned on their backs, trying to guess of each other the bird they represented. Then

everybody flocked to improvised feeding-stations on the walls to help themselves to popcorn, nuts, and oatmeal bird cakes, then back to the bird-pools which were filled with a clear fruit punch and attended by little Goldfinch and Redstart members.

The juvenile program given on John Burroughs' birthday, April 3, was conducted entirely by children from the different schools. One boy gave a sketch of Mr. Burroughs, showing pictures of his home and interests. Seven little boys and girls from the School for the Blind stood up in a row, and, with heads lifted, sang a Bluebird song. A blind teacher told of the birds she had heard on a morning walk and gave their calls. A little deaf and dumb girl danced all over the stage, swooping, diving, and digging for worms. In order to go on the last field-trip in June, 95 children from one school joined the Society. They were given membership cards for the coming year.—LUCY B. STONE, *Secretary*.

Crawfordsville (Ind.) Audubon and Nature-Study Club.—On the evening of February 14, 1919, there was a called meeting of the bird-lovers of Crawfordsville at the high school building. Amos W. Butler, of Indianapolis, gave a most interesting illustrated lecture on "The Birds of Indiana." At the close of this an Audubon and Nature Study Club was organized, with sixty members. The following officers were elected: President, Prof. J. L. Leonard, of Wabash College; Vice-President, Mrs. Julia D. Waugh; Secretary-Treasurer, Prof. C. W. Jack; and Leader, Frank C. Evans. During the rest of the winter regular monthly meetings were held. At the meeting in March, Prof. Leonard delivered an interesting lecture on "Bird-Migration."

On March 28, Mr. Evans secured Miss Margaret Hanna, of Ft. Wayne, to speak to the Club on "Some Phases of Spring Migration." She illustrated this with many lantern-slides and bird-skins. Miss Hanna has the unusual ability of being able to reproduce bird-calls and -songs, and, altogether, her lecture was thoroughly enjoyable and created a great deal of interest in bird-study. On April 26, Prof. Walter Hess, of De Pauw, lectured on "Courtship and Home Life of Birds." Through the instrumentality of some members of the Audubon Club, the Current Events Club of this city became sufficiently interested in birds to turn one of their regular meetings into a Bird Day celebration. On this occasion, May 9, Mrs. Donaldson Bodine spoke on "The Protection of the Birds That Nest about our Homes." Photographs and lantern-slides were used. The Club has caused to be published in the daily press numerous articles urging people to put out food for the birds during the winter and put up nesting-boxes in the spring. The Club has been directly responsible for the erection of twelve Martin houses, and practically every one of them was occupied the past summer.

Spring Ledge, the country home of Frank C. Evans, three miles west of the city, is the spot which attracts the attention of all bird-lovers of this community.

Situated on a bluff along Sugar Creek, furnished with many springs and brooks, nature and art have combined to produce an effect of great beauty. In addition, Mr. Evans, being a bird-lover, has put up sixty-six nesting-boxes, besides two large Martin-houses, many feeding-stations and bird-baths. Under his direction, bird-boxes have also been erected on the grounds of the Country Club which adjoins his place, and by other neighbors in the vicinity. Cats and English Sparrows have practically been exterminated, and we have in actual existence a bird-sanctuary which every year is becoming more beautiful and attractive. Of sixty-six boxes on Mr. Evans' place, thirty-seven were occupied, many of them two or three times during the season. Spring Ledge is always open to visitors, so that our Club, as a whole, and as individuals, has had abundant opportunity for observing Mr. Evans' success in his work of protecting and attracting the birds. Our Club is very enthusiastic, and we look forward to the coming year hopeful of accomplishing greater things for the birds.—C. W. JACK. *Secretary.*



WILD BLACK DUCKS, IN A STARVING CONDITION, FED BY AUDUBON SOCIETY FRIENDS AT MARTIN'S POINT BRIDGE, NEAR PORTLAND, MAINE

Cumberland County (Me.) Audubon Society.—Our Society held its monthly, as well as annual meeting in the rooms of the Portland Society of Natural History, Friday, September 12, 1919, at 8 P.M. The following officers were elected for the year 1919-20: President, Miss Mabel S. Daveis; Vice-

President, Arthur H. Norton; Secretary, Miss Amy Wiswell; Treasurer, Herbert M. W. Haven. Fifteen new members were taken into the Society at this meeting, and it is well on its way to a prosperous year. During the past two years, due to war activities all business and interests of the Society were laid aside, but it is now taking a new lease of life.

The accompanying pictures, taken by the Association's field agent, Arthur H. Norton, show No. 1, George E. Cushman, our local State and National Association of Audubon Societies' warden, feeding wild Black Ducks at Martin's Point Bridge, Portland, Maine, with feed furnished by the Society; No. 2, Black Ducks at Martin's Point Bridge coming to corn, also furnished by our Society.—HERBERT M. W. HAVEN, *Treasurer*.

Elgin (Ill.) Audubon Society.—Our Society now has a membership of 231, which is a gain of 111 in the past year. During the last week in April we held our annual free exhibit, at which it was estimated we had at least 3,000 interested visitors. Our main work of the year has been, and still is, earning money to repair the city museum, which the new City Council has turned over to the use of the Society. In August we had a tag day which netted over \$500, and this fall we plan to raise at least \$400 more.

A lecture by Dr. Carpenter was given in the spring, and one Sunday afternoon the slides of the Illinois Audubon Society were shown and the accompanying lecture given. Most of the schools in the city have Junior Audubon Societies, and we hope by this time next year to say that every school has. Regular meetings are held throughout the year on the second Friday of the month, preceded by a cafeteria supper during the winter months and a picnic in the woods during the summer.—(Miss) CHARLOTTE WEATHERILL, *Secretary*.

Erasmus Hall Audubon Bird Club.—During the past year the Club has been active in establishing feeding-stations in Prospect Park, Brooklyn, where the greater part of our field-work is conducted. The Club has held two school contests—an essay and poster contest respectively—on the subject of bird-protection. The winners, Miss Kathleen Kennedy and Miss Margaret Henschen received school medals. A bird-book was awarded to the student submitting the longest verified list of birds seen from April 1 to May 15. On the whole, the work of the past term has been most successful.—MARION DEGHUEE, *Secretary*.

Greystone Park (N. J.) Bird Club.—Our Club was organized in March, 1919, by the President, Robert Emmet Cooney, and the Secretary, Prince Michael of Saxony, who were its first two members. In a short time the Club numbered over 200 members.

Over a hundred bird-houses were constructed and painted by members of the Club and were placed in various parts of Greystone Park, Morris Plains,

and Wilsonville. The beginnings of a bird-sanctuary were made, food and fresh water were conveyed. Funds were collected and books and magazines were purchased for the Club library.

In June we became affiliated with the National Association of Audubon Societies and have contributed small sums to the Egret Fund and the Roosevelt Memorial Bird Fountain Fund. Our Club numbers now nearly 300 members. Various articles about the Club and its work have often been published. The Secretary has nearly completed three, these entitled respectively: "The Psychological Explanation of the Mental Phenomena Exhibited by Birds;" "The Scientific Explanation of the Flight of Homing Pigeons;" and "The Psychological Explanation of the Semi-Annual Flights of Birds," which will be sent to the National Association of Audubon Societies in due course of time.—PRINCE MICHAEL OF SAXONY, *Secretary*.

Hartford (Conn.) Bird-Study Club.—Nineteen indoor meetings, with varied and interesting programs, were held during the year, at four of which we had illustrated lectures. We had thirteen field meetings, including an excursion to Middletown by boat. About twenty of our members also attended the field meeting of the Connecticut Federation of Bird and Nature Study Clubs at Hubbard Park, Meriden, on May 25. The attendance at all of the meetings has been somewhat smaller than in former years, but this was inevitable in view of epidemic and war conditions. The most we hoped for was to keep alive the interest in the Club until less strenuous times, and we feel that this object has been accomplished, and we are starting on the season of 1919-20 with a bright outlook for a prosperous and busy year.

A great variety of birds have been seen, but only a few of our members were fortunate enough to see the Egrets which spent part of the summer in the vicinity of Waterbury. Some of our members appeared at the hearings in favor of a bill for licensing cats which was introduced into the legislature last winter, and it may be noted that this bill received much more serious consideration at the hands of the legislators than in the previous session, and was finally passed by the House, but was defeated in the Senate.—HELEN C. BECKWITH, *Corresponding Secretary*.

Hamilton (Ont.) Bird Protection Society.—This Society was formed at a meeting held May 1, 1919, fifty members being enrolled. Nine directors were appointed and the following officers elected: Hon. President, Adam Brown; President, R. O. Merriman; First Vice-President, Mrs. H. D. Petrie; Second Vice-President, A. P. Kappele; Secretary-Treasurer, N. M. Anderson.

During the summer the membership of the Society increased to 120, and much good work has been done in educating the general public to the value of the conservation of bird-life and awakening an interest in bird-study. We have a committee working on Junior Club work and good results are expected. Feed-

ing-stations are to be established at various points this fall, and we are trying to enlist the aid of the Boy Scouts in this important work. The grounds of the Barton Reservoir have, by act of the City Council, been proclaimed a bird-sanctuary and there are various other spots around the City that we are endeavoring to have protected in a like manner.

A series of meetings will be held during the coming winter at which prominent Canadian birdmen will speak, with the hope that in the spring of 1920 sufficient public interest will be aroused to put this city on a par with any on the continent in the matter of bird-protection.—N. M. ANDERSON, *Secretary*.

Los Angeles (Cal.) Audubon Society.—The Los Angeles Audubon Society has had a remarkable year in growth and work accomplished.

We have reached the long-striven-for one hundred membership mark and gone beyond it. We responded to the call of the Los Angeles Municipal Playground Camps by sending Miss Helen Pratt, one of our members, as nature-guide and bird-teacher to Seeley Flats and Radford Camp, both in the San Bernardino Mountains. We have successfully inaugurated and carried through a two-days' Audubon exhibit, with lectures, at the public library of our city, with an attendance of 2,000 people.

We have included the study of flowers, trees, and butterflies upon our rambles, thus getting more people interested in birds through our interest in their interests. Our war-work committee raised funds for the purchase of two Liberty Bonds by obtaining life memberships. The Committee has also had engraved a beautiful honor roll of the names of the sons, brothers, and nephews of our members.



TENTH ANNUAL PILGRIMAGE OF THE LOS ANGELES AUDUBON SOCIETY
Photographed by Mrs. F. T. Bicknell



THE LOS ANGELES AUDUBON SOCIETY'S BIRD-FOUNTAIN
 Photographed by Mrs. F. T. Bicknell

We were glad to contribute \$50 toward the Roosevelt Memorial Bird-Fountain. Members have donated a new case in which to house our fast accumulating possessions—charts, maps, birds' nests, flags, honor roll and books, for we now have quite a library, consisting of eight bound volumes of *BIRD-LORE*, one special Index to *BIRD-LORE*, forty-three Government Bulletins bound in twenty-nine covers, Educational Leaflets Nos. 1 to 94, and other books of local interest. Our official speaker has given lectures before the Women's Clubs, P. T. A., at the libraries and schools with great success.

Two new educational features have been added to the regular monthly indoor meetings of the Society—one telling of the birds in migration at that particular time of year by our official speaker, Mrs. G. H. Schneider, and the other a demonstration of some one particular bird's nest by our press chairman, Miss H. S. Pratt. These have proven very attractive to the new members. One of our new members is gifted in music—whistling the notes of our birds with wonderful accuracy and sweetness, which adds much to our programs. With two of our members on the Los Angeles District Board, C. F. W. C.—Miss Helen Pratt as chairman of Birds and Wild Life in the place of Mrs. F. T. Bicknell who has been elected treasurer of that Board—we keep in close touch with the club work of the whole Federation and feel its broadening influence.

Our president has responded to nineteen calls for educational talks illustrated with bird-skins or -slides from her own photographs of our western birds. Her talk on the economic value of birds at the library exhibit was of unusual interest.

Through the influence and suggestion of our official speaker the public library has added several bird-books to its shelves. Among them are "Nature Lover's Library," "Tales from Birdland," and "The Bird Study Book" all by T. Gilbert Pearson; "Bird Life" and "Travels of Birds" by F. M. Chapman; "Bird Friends" by Gilbert Trafton and "Birds of the Islands off the Coast of California" by A. B. Howell. Our members are always on the alert for rare birds not commonly seen here. Among those noted this year have been the White-throated Sparrow, Wood Ibis, Western Blue Grosbeak, Bell's Sparrow, and Harris's Sparrow. All dead birds found in good condition, and sick and disabled birds beyond recovery, are carried to the Museum of History, Science and Art for mounting or bird-skins. On Arbor Day our Society planted a Himalayan cedar in Griffith Park and dedicated it to our soldier boys. Our monthly field-trips have been full of interest and profit. Their scope has been enlarged by after-luncheon speeches by some good speaker. Upon these days 119 different species have been observed. Our trail-trips are independent of the regular field-trips, being arranged to suit teachers, tourists, and strangers. In this way 110 different species have been observed, making 229 species seen this year and 77,583 individual birds.

Our president's and vice-president's playlet, "The California Woodpecker's Convention," was successfully given at the State Normal School at San Jose, Calif., to an audience of 800 pupils. This playlet shows the economic value of the Woodpecker family in their care of fruit and forest trees. We have been addressed by the following speakers: L. E. Wyman, on "The Life Zones of Birds;" Dr. Harold C. Bryant on "The Migration of Birds in California;" Dr. Hector Alliot, on "Butterflies;" (This was his last public appearance, as he passed away suddenly a week afterward.) Earnest Braunton, talked on "California Trees;" Theodore Payne gave us a wonderful lecture, illustrated with colored slides of our California wild flowers; J. C. Alpass, who has resided for forty years in New Zealand, told of the bird-life of that country; Prof. C. S. Thompson read a paper on the "Lake of Lingering Death" (La Brea); Mrs. George Turner, Dr. Emily Hunt, of Pasadena, and our president, Mrs. F. T. Bicknell, have given illustrated talks on different subjects.

Our tenth annual pilgrimage to Elysian Heights was a regular May-day jubilee. With flower-bedecked alpen stocks we climbed the winding trail, singing an original song composed by our program chairman, Mrs. Fargo. At the entrance to Audubon Glen, the home of our hostesses, we were greeted cordially. Speeches, original poems, whistling, singing, and a picnic luncheon composed the program.—MRS. G. H. CRANE, *Corresponding Secretary*.

Meriden (Conn.) Bird Club.—We have an Executive Committee, Field Committee, Entertainment Committee, and a Bird-Protection and Winter-Feeding Committee. The latter Committee consists of twenty-one members, selected from the different quarters of the town, in order to cover the entire

territory by precept and example. We have also included in the Committee members of the Grange and of the Boy Scouts, in order to reach the farmers and the young people particularly.

On May 24 of this year we had a meeting of the State Federation of Bird and Nature Clubs at Hubbard Park, Meriden. The Meriden Bird Club, through its committees, attended to all of the preliminary work and provided guides for the evening. The locality is rich in bird- and plant-life and is interesting from a geological standpoint. From the fine peak there is a wide outlook over the state.

These points were well covered by a preliminary ten-minute talk of each of four guides, and then a hike, lasting several hours, was personally conducted by the speakers. Coffee was served at noon and birds were very much in evidence throughout the day.—FRANK S. FAY, *President*.

Minneapolis (Minn.) Audubon Society.—During the past year, because of general conditions, no great demands were made upon our members for either time or money. Six meetings have been held, with interesting, helpful programs. Dr. Thomas Roberts addressed the Society in January on "The Sparrow Tribe," using a large number of lantern-slides, Frank Beach, Chief of Park Police, discussed the problem of "The Boy with a Gun." The Life of Audubon was the subject of an excellent program, and, at another meeting, Frank Odell, president of the Minnesota Game Protective League, spoke on "Bird Protection Laws," Miss Harriet Cunningham, General Secretary of Y. W. C. A. work in St. Paul, told of her "Bird Acquaintances at the Pine Tree Inn," in Iowa. At a picnic meeting held at Minnehaha Falls in June, the topic was "Roosevelt as a Bird-Lover."

At the annual meeting, Mrs. Phelps Wyman, the founder, moving spirit, and efficient president of the Society since its organization in 1915, declined reelection. She, however, remains active in the Society as chairman of the Field-Work Committee. Mrs. Charles F. Keyes was elected president, Mrs. John F. Hayden, vice-President, and Miss Mathilde E. Holtz, treasurer.

Bird-walks have been taken weekly during the migration season. A considerable increase in the number of songbirds over last year was noticed. In addition to the usual winter birds of this locality, the Tufted Titmouse and Red-breasted Nuthatch were seen, also a few Pine Grosbeaks and Purple Finches. Last spring, eight bird-houses for Wrens and Bluebirds were erected at the Home for Convalescent Soldiers at Fort Snelling. Our Audubon Museum in the Fourth Avenue Branch Library has been maintained throughout the year.

At the request of the Minneapolis Park Board, a committee has been appointed to confer with it in regard to making the park more attractive to birds. Interest in bird-life is undoubtedly increasing in this community, and we feel that this year, with general conditions more favorable, our prospects of active work are brighter than ever before.—(Mrs.) GERTRUDE P. WICKS, *Secretary*.

Missoula (Mont.) Bird Club.—During the summer session held at the University of Montana Biological Station at Yellow Bay on Flathead Lake, Mont., in 1917, Dr. Charles Danforth, of Washington University, St. Louis, conducted a very successful course in ornithology. By the close of the session the members of the class were so much interested in the work that those whose homes were in Missoula, Mont., together with other Missoula residents who were at the station, decided to form a club in order to continue their studies and to interest others in the work. Consequently the Missoula Bird Club was organized at Yellow Bay, July 24, 1917, with 8 members. In January, 1918, the Club became affiliated with the National Association of Audubon Societies. The membership is now 21.

This year the Club members are making a special study of Greenough Park. This is a natural park, with a beautiful mountain stream flowing through it, well wooded with large trees and underbrush, surrounded by hills and mountains, and situated on the edge of the city, thus affording an excellent and convenient place for the study of many different kinds of birds. The work has been outlined and the members are working on the phases of greatest interest to them; these results will be made up into a final report. Topics chosen include such subjects as the vegetation, topographic map, bird census, photographs, ways by which more birds may be induced to come to the park, the usefulness of the park to the schools for bird-study, bird-laws, etc. Outdoor meetings are held in the park, and indoor meetings in the Natural Science Hall at the University of Montana.—(Miss) CAROLINE E. WELLS, *Secretary*.

Neighborhood Nature Club of Westport (Conn.).—Our Club has held its monthly meetings regularly throughout the past twelve months and much good work has been done through the schools of the town. The Club members canvassed each school and secured almost every pupil as a member of the Junior Audubon Society. During the winter a lecture on familiar home birds, with stereopticon slides, was put on at the Fine Arts Theatre of Westport, free to all Junior Audubon Members, the lecturer's fee being donated by our Vice-President, Mrs. Fox.

A 40-acre tract of land surrounding the Westport Mill was made a protected bird-preserve by the owner, Mr. Dorr, at whose request the Nature Club has supervised the placing of selected bird-houses and shelters. Mr. Dorr kindly placed the cozy library at the Mill at the disposal of Club members for meetings and has furthered all the work by his interest.

On April 22 the Club presented three Audubon bird films in connection with a regular film protection at the Fine Arts Theatre. Both afternoon and evening performances drew good attendance, and the Club felt the work was being forwarded in wide fields. The attendance at the regular meetings keeps a good average and plans are being made to work through the schools this coming winter.—(Mrs.) H. P. BEERS, *Secretary*.

New York Bird and Tree Club.—The most important work the Club has done during the year has been the raising of over \$11,000 for the planting of fruit trees in the devastated regions of France, where it has been estimated that one hundred million fruit trees were destroyed. These funds were raised through the sale of a simple memorial card, costing \$1, which insured for the purchaser a fruit tree planted in France, in memory of those who there made the supreme sacrifice in the cause of human freedom. When our contributors visit these orchards at some future time we shall expect them to find numerous birds as well as the much-needed fruit, both helping in a measure to restore peace and prosperity.

The Club meets once a month during seven months, usually at the American Museum of Natural History, but, when the season permits, it holds its meeting out-of-doors. The most delightful of these outings was held on May 23 at the home of the Vice-President, Mrs. Thomas A. Edison, at West Orange, N. J. Mr. Ernest Thompson Seton conducted the council in true Indian fashion around a campfire on the lawn, and called upon the members for bird stories and for their observations of nature. During the picnic supper hour Mr. Edison joined the circle and delighted the members with an account of a trip he had taken with John Burroughs in the Cumberland Mountains.

The second of these outdoor meetings was held on October 10 at Interstate Palisade Park. Mr. Seton again conducted the council, giving some of his most interesting experiences and stories of "Animals I Have Known." Dr. George F. Kunz, the President of the Club, gave some reminiscences of the saving of the Palisades and spoke of the region as particularly adapted to many varieties of birds. He said that Audubon had made his home nearly opposite to this Park because of the opportunities thus present for observing birds.

Perhaps the most interesting of the indoor meetings of the winter was the occasion when T. Gilbert Pearson, Secretary of the National Association of Audubon Societies, related his wonderful experiences in cruising the Gulf Coast of the United States to determine for the Food Administration the status of the Pelican as a food-fish destroyer. The Pelican was endeared anew to all who heard this most interesting address, as it has been for ages the emblem of unselfish love and sacrifice for its young.—HENRIETTA O. JONES.

Pasadena (Calif.) Audubon Society.—Our Society is doing what it can along the lines that seem wisest. Our local press is very kind in giving space, and our reporter puts thought and care on the work. Our individual meetings were fewer than usual on account of the influenza epidemic, but they were good, touching the subject from many viewpoints. The annual picnic, which we feel is an important feature, was an especial success, numerically and socially, and Charles B. Hutchins, the bird whistler, rapid sketcher, and earnest protectionist, was the very man for the occasion. Last winter was not our state legislative year, so the contingent that keeps its eye on such matters had little to do

locally. I wish I had more stirring details to send, but feel that you may report us healthy, and know that we could not take up much space anyway. Kind regards from our White-crowned Sparrows.—EMILY G. HUNT, M.D.

Rhinebeck (N. Y.) Bird Club.—Owing to the absence on military service throughout the entire year of Captain M. S. Crosby, president of the Rhinebeck Bird Club, the Club has not been very active. However, the membership has not fallen off, and one public meeting was held on March 15, when Gerald H. Thayer delivered an illustrated lecture on "Concealing Coloration in the Animal Kingdom." For this lecture the village town hall was filled to capacity, about 400 people being present.

The selling of bird-boxes and bird-food at the Club's headquarters continued throughout the year, the report showing that 1,563 pounds of bird-food were disposed of. Plans are already under way for increased activity during the coming year, when Captain Crosby, who is the leading spirit of the Club, will be at home.—CLINTON G. ABBOTT, *Secretary*.

Rockaway (N. Y.) Branch National Audubon Society.—Like many other organizations, our Society suffered temporary lack of interest the past year on account of war activities of the members. However, a few enthusiastic ones remained faithful and kept up the work. Bird-walks were continued and lists of the birds seen were kept by the members. At each meeting of the Society (held monthly) talks were given on various subjects relating to bird-life. We always try to have one especially attractive number. Sometimes it is a collection of stuffed birds loaned by the American Museum of Natural History in New York, or some collection belonging to a member of the Society. Our President gave a most interesting talk at the March meeting on birds' nests, illustrated by about thirty specimens which he had gathered himself.

Several kodak views of birds at our Sanctuary feeding station were taken by one of the members of the Junior branch. These pictures were sent to BIRD-LORE and were so unusually good that they were accepted for publication. One of the most interesting observations of the winter was that of a pair of White-crowned Sparrows at the Sanctuary. Experienced bird-observers from other Long Island towns heard of them and were skeptical but came to see and were convinced. So far as we have been able to find out, this is the first record of these birds on Long Island in the winter. Another rarity was the appearance of a white Robin in May, but his stay was only temporary.

Our May meeting was devoted to a Roosevelt program, and \$50 was voted as a gift of the Society toward the Roosevelt Memorial Fountain. This was made possible through the High School Bird Club which sold tickets for a lecture by Dr. Clyde Fisher, of New York City, who very generously gave his services free. The lecture was patronized mainly by the school children who were enthusiastic over having a part in the Roosevelt Memorial. Plans for

the coming winter include several lectures by bird-lovers. We find that it is better to have a small society of bird members who are really interested and will work than to strive for numbers. The heronry at Mrs. Daniel Lord's estate is truly a remarkable thing, and seems to be growing rapidly in numbers.—(Miss) MARGARET S. GREEN, *Secretary*.

Saratoga (N. Y.) Bird Club.—We have held nine monthly meetings during the past year. Readings have been given from Burroughs, Harold Baynes, Herbert Job, Wells W. Cooke, and others. An illustrated lecture was given in January by Edward Avis, and one in March by Dr. Arthur Allen, of Cornell University. To these the public was invited without charge. Papers have been read by Dr. Calvin O. May, of New York City, and Miss Georgia Benedict, Librarian in the State Library at Albany.

Peculiar bird-nests have been exhibited, one that of the Arizona Wooded Oriole, being sent to our president from California. In construction the Chimney Swift's nest was like a log-cabin and shone as if it had been varnished. A Cape May Warbler, the first seen in this vicinity for twenty years, was reported by Mr. Rich, our president. Our Club has sent contributions to both the Roosevelt Memorial Fountain and to the Orchard in France funds. Since last year, death has claimed three of our most faithful members: Miss Mary L. Shepherd, Mrs. Margaret Trim, and Dr. Calvin O. May. Our last meeting was held in the country on a farm formerly on the old post road. Hummingbirds and hospitality made the day memorable.—CAROLINE C. WALBRIDGE, *Secretary*.

Scranton (Pa.) Bird Club.—Our Club was organized March, 1915, and, following a lecture at the Century Club, by E. H. Baynes, was affiliated with the National Association of Audubon Societies in March, 1919.

Besides the usual problems of pioneer work and the difficulties peculiar to the wild-life conservation movement, we faced the additional handicap of a mining and industrial community, the majority of the population being foreign-born. With such a setting, the problem was whether a subtle thing like an interest in birds could survive at all, born as it was under the shadow of a culm bank from where it cried out for green fields, trees and gardens, and, above all, for education in an apparently heretofore unopened book. The fact that it has survived and is in a healthy condition today is due, first, to the vital interest of the subject itself, then to the faithfulness of the officers.

Our membership numbers 650, of which 283 are Juniors. There are no dues, the expenses so far being met by members who have made voluntary contributions. Regular meetings are held at the change of seasons and on Arbor Days, with special meetings whenever there seems a special need, which brings the average to at least one a month. These are held at the Everhart Museum when not out-of-doors, and are all well attended. The activities include the

annual spring bird-house competition, bird-naming contests, tramps in the open, talks by members, exhibits, two of which lasted for a week at a time. The first one attracted hundreds of visitors, while at the second, held in connection with a health exhibit, 1,000 children daily opened the sessions. Mr. Henry Oldys spent a week in the vicinity in 1916, speaking twice daily to audiences arranged for him by the Club and doing a world of good in his own inimitable style.

Through the efforts of the Club a number of nesting-houses were made by prisoners in the county jail. These were afterward erected on the grounds of the West Mountain Sanitarium for Tuberculosis. During the war the birds' part in food conservation was unceasingly preached, and "War" posters were placed throughout the vicinity, while thousands of U. S. Government Bulletins and National Audubon publications have been distributed at every opportunity. In the Welcome Home Parade, June 10, the Club was represented by a small pageant featuring Homing Pigeons, in recognition of their invaluable services at the front. All this has been done without any campaign for funds, but by the determined efforts of those in control to spread the message of the mission of the birds at all times, despite all difficulties.—(Mrs.) FRANCIS HOPKIN COFFIN, *President*.

Seattle (Wash.) Audubon Society.—Our energies for the past year have been devoted to the organization and upkeep of the Junior Societies. The results have been most gratifying. Surely there is nothing more worth-while than to awaken the interest of hundreds of children in the outdoors. We now have seven large Junior Societies in the branch libraries of Seattle, and plans are under way to organize two more very soon. This will make one in every library in the city. We have bought two Sparrow traps, and both are giving splendid service. One is in constant use in the city parks, and we expect to do more work on the English Sparrow question this winter.

The cat-license ordinance, which went into effect March 1 of this year, is showing satisfactory results, though, of course, in a city as large as Seattle, and with such large areas of woods and unsettled lots within its borders, it takes a long time to find all the stray cats. We have kept in touch with the Boy Scouts in the interest of the birds and have responded to requests for bird-talks in the city schools.

We plan to push the establishment of Junior Audubon Societies in the schools. They are now barred because of a school law against clubs which collect dues. We hope to make the Bird Clubs a part of regular school-work.—(Mrs.) C. N. COMPTON, *President*.

South Bend (Ind.) Humane Society.—Our Society has been in business for over thirty years. It has been especially instrumental in placing thousands

of Wren-boxes all over this city, and, as a result, there are thousands of these singers with us the entire summer.

Every spring we have a humane-essay contest in the public schools. This year 650 essays were submitted.

Our president is George B. Beitner; our secretary, Henry A. Pershing. The secretary has been closely affiliated with this Society for over twenty-five years, having been its secretary for twenty years.—H. A. PERSHING, *Secretary*.

Spokane (Wash.) Bird Club.—After the raising of the influenza quarantine, our Club held its two regular indoor meetings a month during the winter of 1918-19 and a number of walks. The annual Memorial Day walk has become a feature of the Club, and the lists of birds seen an interesting historical item. We assisted the County Historical Society in placing a valuable collection of wild birds of this vicinity in our city museum. This year we expect to have one indoor meeting a month, and one walk, led and directed by a club member.—(Mrs.) CORA B. ROBERTS, *Secretary*.

Vigo County (Ind.) Bird Club.—Our Club is now entering on its third year, with a membership of fifty-eight. During the year we have had several interesting lectures. Through the influence of the Club many bird-houses have been erected in the parks, and a bird-fountain has been placed in Woodlawn Cemetery. We have been given the privilege, by the Board of Works, to make the cemeteries and parks bird-sanctuaries.

Several field-trips were taken during the year, and much interest was shown in bird-life and especially in nest-building. Many new birds were seen and studied. The citizens of Terre Haute are taking a most active interest in bird-life, as shown by the number of bird-houses erected. The school children have been especially active in building and putting up bird-houses.—SARAH J. ELLIOT, *Secretary*.

Wallace (Idaho) Bird and Nature-Study Club.—Following a lecture on birds by Charles Crawford Gorst, at the summer Chautauqua of 1918, a large number of persons remained and discussed with him the possibility of organizing a bird club. At his suggestion an executive committee was chosen and correspondence with the National Association of Audubon Societies was begun. A meeting was called by the chairman in December, 1918, and the Club was formally organized with a charter membership of 17 and the following officers: President, A. A. Maggy; Secretary, Mrs. Carl Veazie; Treasurer, Mrs. N. C. Sheridan.

The monthly meetings have been instructive and enjoyable. A bird and flower census is being taken and a general interest in bird-life is being created in the community. The annual election of officers was held October 6, 1919, and the following officers elected: President, C. E. Clark; Secretary, Mrs. J.

Benjamin Parker; Treasurer, Miss Irene White. Under the leadership of the secretary, a Junior Club was organized with a membership of ninety-six. A very successful bird-house contest was conducted. There were twenty-two entries and these made an attractive display in one of the downtown store windows. A bird and flower identification contest has been running all summer and closes October 9. There are forty-one entries. Attractive prizes of cameras and books will be donated to the boys or girls who can identify the largest number of birds or flowers. This large Junior Club was so unwieldy that it was divided this fall into three clubs. "The Outdoor Club," consisting of seventh and eighth grade pupils; "Field and Forest Club," fifth and sixth grade pupils; and "Bird and Flower Club," third and fourth grade pupils. These have elected officers and will hold regular meetings under the leadership of several of the teachers who have volunteered their services. Twenty-one new members have already been received.—(Mrs.) CARL H. VEAZIE, *ex-Secretary*.

Watertown (N. Y.) Bird Club.—During the year we held one evening meeting, four afternoon meetings, and one outing. The activities of the Club have centered along two lines this year: arousing the school children's interest in birds, and in the conservation of local bird-life. Record blanks were issued by the Board of Education to each teacher. Daily lists of the birds observed were made and weekly reports returned to the Superintendent of Schools. These record blanks were also sent to each school district in the county and met with hearty coöperation. From these lists Frank Tisdale, local Superintendent of Schools and President of the Jefferson County Teachers' Association, hopes to compile a complete census of bird arrivals in this county. Ten Sawyer bird-houses were placed in the city park, also a Wren-house in the Flower Memorial Library grounds. A scrapbook containing interesting clippings about birds was prepared and placed in the library reading-room for the use of the public. A contribution of \$5 was sent to the Roosevelt Memorial Fountain Fund. A complete set of Audubon educational leaflets was procured and much enjoyed by the Club members.

Although the meetings were fewer and the attendance smaller, on account of the war work activities of many of the members, that the interest in the Club is a healthy one is evinced by the treasurer's report which tells of the prompt payment of yearly dues.—(Miss) GRACE B. NOTT, *Secretary*.

West Chester (Pa.) Bird Club.—Our Club is an organization of twelve years' duration. During the past year it has become a sustaining member of the National Association of Audubon Societies.

The Club was planned primarily to interest the teachers of the town, and several of them are found in the list of members. The membership also contains many noted ornithologists. Chief among this number is the president, Dr. Clyde E. Ehinger. He is a man of extensive knowledge of the out-of-doors, has

the rare ability of enthusing all who have the privilege of taking the field-trips with him. He also possesses the rare gift of imitating the notes of the common birds.

Dr. B. H. Warren, another member, is a former state ornithologist. He is the author of "Birds of Pennsylvania," and other publications in the line of ornithology. Among other members are Thomas H. Jackson, Robert P. Sharples, and Dr. S. C. Schmucker. Each one of these has contributed largely to the sum of bird literature. Mr. Jackson's collection of birds' eggs is one of the finest in this country.

The Club is a practical working one composed of about forty members. It has paid much attention to outdoor life in its many phases. Many of the members have kept careful records of the migrating birds for the past eleven years. These are kept in a book especially designed by Dr. Ehinger. The knowledge gained by these records has come from field observation and from contact with the birds in their natural environment. Each spring there is an average of sixteen walks, and the number of different species seen during the past spring was 118.

The field-trips are worthy of special mention. Many places of historic interest as well as those rich in bird-life have been visited. For the past seven years there has been an annual two-day's trip to Peach Bottom on the Susquehanna River. This excursion is made the first week-end in May. A discussion of things observed on the field-trips, as well as many individual experiences, forms a part of each bi-weekly meeting. Reviews of current bird literature are also frequently given. A careful survey of the Christmas Bird Census, as given each year in BIRD-LORE is part of the program for one meeting each winter. A Birds' and Poets' meeting is another unique feature. At this time each member reads a bird poem of his choice, or one of his own composition.

Much also has been done to interest the pupils in the schools. Dr. Ehinger has been the stimulus in this work and has given frequent lectures as the migrating birds were returning. The teachers have supplemented his work, and, as a result, the children are interested in bird-life and do much toward its protection. One spring 180 children in the Model School constructed bird-boxes. These were all erected in or near West Chester. The Club has made several visits to the Academy of Natural Sciences in Philadelphia. Here Dr. Witmer Stone has shown the rare collections of Warblers' skins.

The Club has also in its possession a fine collection of bird-skins purchased from one of West Chester's most careful bird students. Bird-work has so grown in interest to all of the Club that a committee of the more experienced members is now preparing a report on "The Birds of Chester County." This will appear at a future date.—LILIAN W. PIERCE, *Secretary*.

Wild-Life Protective Association (Wis.).—The past year the Society joined with the local state game-warden in posting a reward of \$25 for the

arrest of violators of the game-laws and advertising same in the local papers. A resolution was passed and sent to the Wisconsin Game Protective Association, concerning the erection and maintenance of game-refuges throughout the state. Protection and maintenance of state game-refuges was taken up with the State Conservation Commission. Bird-house pamphlets were distributed among the Boy Scouts.

The Society voted to join in the effort being made by the W. G. P. A. looking toward the establishment of a permanent fund for maintaining a field secretary and providing for the expenses of that Association. The Society is planting its bird-refuge, is providing food for the birds, and expects to put up wooden nesting-boxes this fall to provide shelter for the hole-dwellers during the coming winter. A resolution requesting the modification of, and opposing in its present form, the destruction of birds and animals, as proposed by Wisconsin Conservation Commission, was adopted and forwarded to the Commission. Prizes were offered to Boy Scouts of Milwaukee County by the Society on a competitive basis for the best record made concerning information on local wild life.

A prize essay competition, open to members of this Society, members of the clubs enrolled in W. G. P. A., and individual members of that Association, also Wisconsin members of American Game Protective Association, has been inaugurated, circulars of which are enclosed. Our Society now has 125 active members and a considerably larger list of non-active members whose interest we hope to reawaken.—CHARLES I. FOSTER, *Secretary*.

Winter Park (Fla.) Bird Club.—The Winter Park Bird Club, affiliated with the Florida Audubon Society and the National Association of Audubon Societies, completed its first year last March. Its special activity is the supervision of the Winter Park Bird Sanctuary, the first municipal sanctuary to be tried out in the state, and the success of which is much commended by our bird-loving residents and winter visitors.

During the year, ten well-attended meetings were held, at which brief bird-talks, field observations, reports on local conditions and interesting ornithological notes and gleanings were the principal items of the programs given. Two bird-talks, illustrated by lantern-slides, were given by the secretary. The membership is upwards of eighty, with an average attendance of forty, and the Club has been fortunate in gaining the active interest of many bird-lovers from other states who spend the colder months at Winter Park.

The activities of this Club, with its splendid personnel and lively interest in the cause of wild bird-conservation, together with the success of the sanctuary, has caused Winter Park to become the best known and most widely talked of "Bird Town" in Florida, and tidings of its good work are carried by our winter visitors to many distant states. Our active work for the present season will begin in October.

The officers are: President, Rev. W. M. Burr; Vice-President, Mrs. Hiram Byrd; Executive Secretary, W. Scott Way; Recording Secretary, Miss Katherine Stitch; Treasurer, C. D. Powell.

The most recent activity of the Club is a handsome bird-fountain in one of the town parks, plans for which are just completed.—W. SCOTT WAY, *Secretary*.



AT A MEETING OF THE WINTER PARK BIRD CLUB

Wyncote (Pa.) Bird Club.—The Club has had some interesting meetings during the past year, the best of which was an illustrated lecture-recital by Edward Avis, bird mimic. We were unfortunate with the spring bird-walks. Again and again they were scheduled, and all plans made for a picnic or other out-of-doors jaunt, when the day would bring only rain, rain, rain. One wondered if so much cloudy weather during the migration would not cause unusual loss of bird-life.

Several interesting visits were made to "Briar Bush," the home of a member, a log-cabin set in a clearing of woods, where everything possible is done to attract birds, and where more birds are to be seen to the acre than at any other place we have found. Nest-boxes, tenanted, are everywhere; nine rustic baths are constantly kept filled with fresh water; food is always on hand for the feathered guests; and a shotgun in a convenient place ready to dispose of a stray red squirrel or an encroaching English Sparrow or Starling. Inside the large living-room, a fire roaring on the hearth, dozens of us may sit gazing out

through the enormous window, watching, in fair or cloudy weather, the other guests without, who bathe, feed, make love—or scrap, and who seem to enjoy themselves quite as much as we.

For the first time since our Club was organized, Chickadees visited Wyncote, and many of our members have been thrilled by having them feed from their hands. A food-tray at a window attracted them constantly. It is a simple matter to extend the hand, holding peanuts, through the partly raised window, and the birds will show their trusting nature by alighting upon it.—ESTHER HEACOCK, *Secretary*.

Wellesley (Mass.) College Bird Club.—Because of the war's demands on time, energy, and money, and later of reconstruction, no new work was started by the Wellesley College Bird Club, during the past year. The regular activities were carried on as usual. However, seventy nesting-boxes were kept clean and in order and fifteen feeding-stations maintained. The percentages of occupancies of nesting-boxes during the past three years have been, 50, 27, and 58.5 per cent. The high percentage of the first year was due in part to English Sparrows. In the past year we have had an increase in the number of Blue-birds, Swallows, and Wrens, and a decrease in Chickadees, due perhaps to the large number of Wrens.—(Miss) HELEN HUMPHREY, *Secretary*.

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Secretary, Miss Hattie E. Richardson, 2337 Dexter St., Denver.

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Secretary, Helen P. Childs, Chevy Chase, Maryland.

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Secretary, W. Scott Way, Winter Park.

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Secretary, Dr. Emma J. Welty, 321 Montgomery St., Portland.

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Secretary, Miss Elizabeth W. Fisher, 2222 Spruce St., Philadelphia.

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Secretary, Mrs. Judson L. Wicks, 1911 Pillsbury Avenue, Minneapolis.

MISS HATTIE AUDUBON SOCIETY:

President, Mrs. Pierce Butler, 1303 First St., Louisville, Ky.

Secretary, Miss Jenny L. Robbins, 505 W. Ormsby Ave., Louisville, Ky.

MISSOULA (MONT.) BIRD CLUB:

President, Mrs. Sarah S. Sumner, 416 Grand Ave., Missoula.

Secretary, Miss C. Wells, 502 South Fourth St., W., Missoula.

MONDAY TOPIC CLUB OF EAST ORANGE (N. J.):

President, Mrs. Emma Porter, 4 Fairview Ave., Orange.

Secretary, Mrs. F. G. Handel, 55 State St., East Orange.

NEIGHBORHOOD NATURE CLUB:

President, Miss Elizabeth H. Banks, Westport, Conn.

Secretary, Mrs. H. P. Beers, Southport, Conn.

NEWARK (N. J.) BAIT AND FLY CASTING CLUB:

President, Kenneth F. Lockwood, 92 Richelieu Terrace, Newark.

Secretary, R. Kersting, 82 Fulton St., New York City.

NEW BEDFORD (MASS.) WOMAN'S CLUB:

President, Mrs. Walter H. Bassett, 347 Union St., New Bedford.

Secretary, Mrs. I. M. Kelsey, 53 Willis St., New Bedford.

NEWBURYPORT (MASS.) BIRD CLUB:

President, _____

Secretary, Miss Helen Coffin, 120 State St., Newburyport.

NEW CENTURY CLUB OF UTICA, NEW YORK:

President, Mrs. Francis W. Roberts, 253 Genessee St., Utica.

Secretary, Miss Ida J. Butcher, 253 Genessee St., Utica.

NEW YORK BIRD AND TREE CLUB:

President, Dr. George F. Kunz, 601 West 110th St., New York City.

Secretary, Miss Anna Jones, 230 W. 105th St., New York City.

NORRISTOWN (PA.) AUDUBON CLUB:

President, Willis R. Roberts, 800 DeKalb St., Norristown.

Secretary, Miss Helen A. Bomberger, 556 Stonebridge St., Norristown.

NORTH EAST (PA.) NATURE STUDY CLUB:

President, Miss Laura Selkregg, North East.

Secretary, Miss Alice Moorehead, 55 Gibson St., North East.

OIL CITY (PA.) AUDUBON CLUB:

President, Miss Grace Robinson, 304 Orange St., Oil City.

Secretary, Miss Hattie Goold, 106 West First St., Oil City.

PASADENA (CALIF.) AUDUBON SOCIETY:

President, Dr. Garrett Newkirk, Pasadena.

Secretary, Miss Francis K. Walter, 1085 North Raymond Ave., Pasadena.

PHILERGIANS (THE):

President, Mrs. Walter A. Poore, 94 Liberty St., East Braintree, Mass.

Secretary, Mrs. Winthrop T. Case, 140 Adams St., Braintree, Mass.

PORT HURON (MICH.) BIRD CLUB:

President, S. J. Watts, Port Huron.

Secretary, Mrs. John Gaines, 2638 Stone St., Port Huron.

RACINE (WIS.) BIRD CLUB:

President, _____

Secretary, Miss L. M. Collier, 1308 Main St., Racine.

RANDOLPH BIRD CLUB OF WESTFIELD (N. Y.):

President, Mrs. Clara K. Trump, Hillcrest Farm, Westfield.

Secretary, Miss Olive R. Jones, 26 Chestnut St., Westfield.

READ, MARK AND LEARN CLUB:

President, Mrs. Julia A. Rich, 32 Whitmarsh St., Providence, R. I.

Secretary, Miss Harriet C. Edmonds, 79 Keene St., Providence, R. I.

RESOLUTE CIRCLE OF THE KING'S DAUGHTERS:

President, Mrs. Elizabeth Rathburn, Ivoryton, Conn.

Secretary, Mrs. L. Behrens, Ivoryton, Conn.

RHINEBECK (N. Y.) BIRD CLUB:

President, Maunsell S. Crosby, Rhinebeck.

Secretary, Clinton G. Abbott, Conservation Commission, Albany.

ROCKAWAY (N. Y.) BRANCH OF THE NATIONAL AUDUBON SOCIETY:

President, Arthur H. Cooper, 7 Lockwood Ave., Far Rockaway.

Secretary, Miss Margaret S. Green, 2007 Cornage Ave., Far Rockaway.

ROCK ISLAND (ILL.) COUNTY BIRD CLUB:

President, P. S. McGlynn, Moline.

Secretary, Miss Nellie E. Peetz., Rock Island.

RUMSON (N. J.) BIRD CLUB:

President, Ira Barrows, 15 Maiden Lane, New York City.

Secretary, John B. Lunger, 120 Broadway, New York City.

SAGEBRUSH AND PINE CLUB:

President, J. Howard Wright, North Yakima, Wash.

Secretary, Miss Carrie Grosenbaugh, North Yakima, Wash.

ST. LOUIS (MO.) BIRD CLUB:

President, Dr. Robert J. Terry, 5315 Delmar Ave., St. Louis.

Secretary, Mrs. Kelton E. White, 4354 Maryland Ave., St. Louis.

SARATOGA (N. Y.) BIRD CLUB:

President, Waldo Leon Rich, 15 Rock St., Saratoga Springs.

Secretary, Miss Caroline C. Walbridge, 109 Lake Ave., Saratoga Springs.

SCITUATE (MASS.) WOMAN'S CLUB:

President, Mrs. Eva L. Granes, North Scituate.

Secretary, Mrs. Mary A. Doherty, Scituate.

SCRANTON (PA.) BIRD CLUB:

President, Mrs. Francis H. Coffin, 1528 Jefferson Ave., Scranton.

Secretary, Mrs. George M. Hallstead, 324 Clay Ave., Scranton.

SEATTLE (WASH.) AUDUBON SOCIETY:

President, Mrs. C. N. Compton, 6510 First Ave., N. E., Seattle.

Secretary, Miss Mayme Farrar, 1521 15th Ave., Seattle.

SEWICKLEY VALLEY (PA.) AUDUBON SOCIETY:

President, C. B. Horton, 21 Centennial Ave., Sewickley.

Secretary, Mrs. M. G. Rose, 123 Meadow Lane, Edgeworth, Sewickley

SHAKER LAKES (OHIO) GARDEN CLUB:

President, _____

Treasurer, Miss Ruth H. Janes, Cleveland.

SKANEATELES (N. Y.) AUDUBON SOCIETY:

President, Rev. A. T. Vail, Skaneateles.

Secretary, Miss Sarah M. Turner, Skaneateles.

SMITHLAND (IOWA) AUDUBON SOCIETY:

President, Mrs. Kate Rahn, Smithland.

Secretary, Gordon B. Nelson, Smithland.

SOUTH BEND (IND.) HUMANE SOCIETY:

President, George B. Beitner, South Bend.

Secretary, H. A. Pershing, South Bend.

SOUTH HAVEN (MICH.) BIRD CLUB:

President, Mrs. A. D. Williams, R. D. No. 2, South Haven.

Secretary, Miss Florence T. Gregory, South Haven.

SPOKANE (WASH.) BIRD CLUB:

President, Walter Bruce, 813 Lincoln Place, Spokane.

Secretary, Mrs. Cora Roberts. Breslin Apartments, Spokane.

STATEN ISLAND (N. Y.) BIRD CLUB:

President, Mrs. Charles M. Porter, 224 Davis Ave., West New Brighton.

Secretary, Charles W. Lang, New Brighton.

SUSSEX COUNTY (N. J.) NATURE STUDY CLUB:

President, Mrs. Wm. G. Drake, 33 Halsted St., Newton.
Secretary, Miss F. Blanche Hill, Andover.

TUESDAY SOROSIS CLUB:

President, Mrs. Maude B. Mellen, 52 Abbott St., Lawrence, Mass.
Secretary, Miss Elizabeth McKillop, 4 Berkeley St., Lawrence, Mass.

TWENTIETH CENTURY CLUB OF DETROIT (MICH.):

President, Francis C. Osborn, 64 Lawrence Ave., Detroit.
Secretary, Mrs. Chas A. Rulsie, 859 Cass Ave., Detroit.

ULSTER (N. Y.) GARDEN CLUB:

President, Mrs. John Washburn, Saugerties.
Secretary, Mrs. Charles Warren, Clinton Ave., Kingston.

VASSAR WAKE ROBIN CLUB:

President, Miss Mary K. Brown, Vassar College, Poughkeepsie.
Secretary, Miss Mary Horne, Vassar College, Poughkeepsie.

VERMONT BIRD CLUB:

President, Dr. Ezra Brainerd, Middlebury.
Secretary, Mrs. Nellie Flynn, Burlington.

VIGO COUNTY (IND.) BIRD CLUB:

President, Mrs. T. W. Moorehead, 126 West 8th St., Terre Haute.
Secretary, Miss Sarah J. Elliott, Union Hospital, Terre Haute.

WADLEIGH GENERAL ORGANIZATION:

President, Miss Frieda Finklestein, 233 West 112th St., New York City.
Secretary, Miss Mildred Bunnell, 235 West 135th St., New York City.

WALLACE (IDAHO) BIRD AND NATURE STUDY CLUB (THE):

President, C. E. Clark, 204 Bank St., Wallace.
Secretary, Mrs. J. Benjamin Parker, 151 King St., Wallace.

WASHINGTON (IND.) AUDUBON SOCIETY:

President, Mrs. R. C. Hyatt, 702 East Walnut St., Washington.
Secretary, _____

WASHINGTON STATE FEDERATION OF WOMEN'S CLUBS:

President, Mrs. C. P. Balabanoff, 724 K. St., Tacoma.
Secretary, Mrs. John D. Morris, 3621 North 8th St., Tacoma.

WATERBURY (CONN.) BIRD CLUB:

President, Mrs. A. A. Crane, 200 West Main St., Waterbury.
Secretary, C. T. Northrap, Care of Boy Scouts of America, 144 Bank St., Waterbury.

WATERTOWN (N. Y.) BIRD CLUB:

President, P. B. Hudson, Watertown.
Secretary, Miss Grace B. Nott, Watertown.

WELLESLEY COLLEGE BIRD CLUB:

President, Miss Anna Thun, Claflin Hall, Wellesley, Mass.
Secretary, Miss Helen Gary, 115 Tower Court, Wellesley, Mass.

WEST CHESTER (PA.) BIRD CLUB:

President, Dr. Clyde E. Ehinger, West Chester.
Secretary, Miss Lilian W. Pierce, 205 South Walnut St., West Chester.

WESTERN PENNSYLVANIA AUDUBON SOCIETY:

President, Charles B. Horton, 902 Standard Life Building, Pittsburgh, Pa.
Secretary, John W. Thomas, Frick Building, Pittsburgh, Pa.

WEST VIRGINIA BIRD CLUB:

President, H. R. Hunt, Morgantown.
Secretary, Miss Ida S. Given, Morgantown.

WILD LIFE PROTECTIVE SOCIETY (MILWAUKEE, WIS):

President, Clarence J. Allen, P. O. Box 738, Milwaukee.

Secretary, Charles I. Foster, 534 Caswell Block, Milwaukee.

WILLIAMSTOWN (MASS.) BIRD CLUB:

President, Mrs. Walter McLaren, Williamstown.

Secretary, Mrs. Carroll L. Maxey, Williamstown.

WINTER PARK (FLA.) BIRD CLUB:

President, Rev. W. M. Burr, Winter Park.

Secretary, W. Scott Way, Winter Park.

WISCONSIN GAME PROTECTIVE ASSOCIATION:

President, Dr. A. T. Rasmussen, La Crosse.

Secretary, E. P. Trautman, Stevens Point.

WOMAN'S CLUB OF SEYMOUR, CONNECTICUT:

President, Mrs. E. B. Hobart, 40 Maple St., Seymour.

Secretary, Mrs. L. C. McEwen, 106 West St. Seymour.

WYNCOTE (PA.) BIRD CLUB:

President, Everett Griscom, "Briar Bush" Roslyn.

Secretary, Miss Esther Heacock, Wyncote.

WYOMING VALLEY AUDUBON SOCIETY:

President, Dr. H. M. Beck, 68 West Northampton St., Wilkes-Barre, Pa.

Secretary, H. W. Bay, 66 Pettebone St., Forty Fort, Pa.

NEW YORK, October 25, 1919.

DR. F. A. LUCAS,

Acting President,

National Association of Audubon Societies,

New York City.

Dear Sir: We have examined reports submitted by John H. Koch & Company, certified public accountants, on the accounts of the National Association of Audubon Societies for the year ending October 19, 1919. The accounts show balance sheets of October 19, 1919, and income and expense account for the year ending the same date. Vouchers and paid checks have been examined by them in connection with all disbursements, and also the securities in the Safe Deposit Company.

Yours very truly,

J. A. ALLEN,

T. GILBERT PEARSON,

Auditing Committee.

The Report of the Treasurer of the National Association of Audubon Societies, for Year Ending October, 19, 1919

Exhibit A

ASSETS

<i>Cash in Banks and at Office</i>		\$40,642 42
<i>Furniture and Fixtures—</i>		
Balance October 19, 1918.....	\$1,850 51	
Purchased this year.....	497 55	
	<hr/>	
	\$2,258 06	
<i>Less—Depreciation</i>	317 73	
	<hr/>	\$1,940 33
<i>Inventory of Plates, etc. (Nominal Value)</i>		500 00
<i>Bird Island Purchase, Orange Lake, Fla.</i>		250 20
<i>Buzzard Island, S. C.</i>		300 00
<i>Audubon Boats—</i>		
Balance, October 19, 1918.....	\$2,550 42	
Additions this year.....		
	<hr/>	
	\$2,550 42	
<i>Less—Depreciation</i>	357 88	
	<hr/>	2,192 54
<i>Investments, Endowment Fund—</i>		
Bonds and Mortgages on Manhattan Real Estate.....	\$384,600 00	
U. S. Mortgage & Trust Co. Bonds.....	3,000 00	
Manhattan Beach Securities Co.....	1,000 00	
U. S. Government Liberty Bonds.....	25,100 00	
	<hr/>	413,700 00
<i>Investments, Mary Dutcher Memorial Fund—</i>		
Bonds and Mortgages on Manhattan Real Estate.....		7,100 00
<i>Accrued Interest on Investments</i>		752 25
		<hr/>
		\$467,377 74

LIABILITIES

<i>Endowment Funds—</i>		
Balance, October 19, 1918.....	\$416,159 89	
Received from Life Members.....	8,555 00	
Received from Gifts.....	210 00	
	<hr/>	\$424,924 89
<i>Mary Dutcher Memorial Fund—</i>		
Balance, October 19, 1919.....		7,737 70
<i>Special Funds—</i>		
Egret Protection Fund, Exhibit C.....	\$1,539 44	
Children's Educational Fund, Northern States, Exhibit D.....	5,137 40	
Department of Applied Ornithology, Exhibit E.....	77 09	
Roosevelt Memorial Fund.....	13,674 69	
	<hr/>	20,428 62
<i>Accounts Payable—</i>		6,523 06
<i>Surplus—</i>		
Surplus beginning of year.....	\$11,355 52	
<i>Less—Balance from Income Account, Exhibit B.</i>	3,592 05	
	<hr/>	7,763 47
		<hr/>
		\$467,377 74

INCOME AND EXPENSE ACCOUNT—General Fund

Exhibit B

EXPENSES

Warden Services and Reservations—

Salaries.....	\$1,310 84
Launch expenses.....	590 29
Reservation expenses.....	3 75

\$1,904 88*Educational Effort—*

Administrative expenses.....	\$7,966 99
BIRD-LORE, extra pages Annual Report.....	2,100 04
BIRD-LORE to members.....	4,309 58
Bird Books.....	1,454 39
Colored plates in BIRD-LORE.....	577 67
Long Island Bird Club Expenses.....	41 12
Contribution to U. S. Department Interior.....	194 00
Drawings.....	106 00
Electros and half-tones.....	137 50
Educational Leaflets.....	7,194 90
Field-glasses.....	917 85
Field Agents, salaries and expenses.....	4,240 89
Contribution to Brewster Memorial Fund.....	200 00
Contribution to Massachusetts Audubon Society.....	750 00
Library account.....	419 24
Printing—Office and Field Agents.....	246 60
Slides.....	1,191 80
Summer school work.....	490 00
Miscellaneous—Supply Department.....	673 95

\$33,212 52*General Expenses—*

Auditing.....	\$125 00
Annual meeting expense.....	352 00
Cartage and expressage.....	74 64
Depreciation on boats.....	357 88
Depreciation on office furniture.....	317 73
Electric light.....	30 45
Exchange on checks.....	20 73
Envelopes and supplies.....	360 33
Insurance.....	158 26
Legal services.....	275 00
Miscellaneous.....	411 00
Multigraphing.....	40 80
Publicity and New Membership Campaign.....	9,809 95
Office and storeroom rents.....	1,860 00
Office assistants.....	8,953 65
Postage.....	2,187 38
Supply Department expense.....	946 67
Stencil addressograph machine.....	63 09
Telegraph and telephone.....	215 80
Roosevelt Memorial Fund expense.....	3,789 29

30,349 65

\$65,467 05

INCOME

<i>Members' Dues</i>		\$21,600 00
<i>Contributions</i>		7,171 95
<i>Interest on Investments</i>		22,287 27
<i>Supply Department Receipts—</i>		
Bird Books	\$2,025 08	
BIRD-LORE	800 45	
Educational Leaflets	5,053 44	
Field-glasses	929 50	
Slides	849 37	
Bulletins—Department of Applied Ornithology	91 67	
Cabinets	193 54	
Charts	546 23	
Miscellaneous	326 50	
		10,815 78
<i>Balance carried to surplus for the year (Exhibit A)</i>		3,592 05
		<hr/> \$65,467 05

EGRET PROTECTION FUND
INCOME AND EXPENSE ACCOUNT

Exhibit C

INCOME—

Balance unexpended October 19, 1918	\$1,437 84	
Contributions	1,763 00	
		<hr/> \$3,200 84

EXPENSES—

Egret wardens and inspections	\$1,625 40	
Prosecution	36 00	
		<hr/> 1,661 40
Balance unexpended October 19, 1919 (Exhibit A)		<hr/> \$1,539 44

CHILDREN'S EDUCATIONAL FUND

INCOME AND EXPENSE ACCOUNT

Exhibit D

INCOME—

Balance, October 19, 1918.....	\$16,235 52	
Contributions.....	24,565 00	
Junior Members' fees.....	19,484 40	
		<hr/> \$60,284 92

EXPENSES—

Administrative Expenses.....	\$1,000 00	
Audubon cabinets.....	3,504 00	
BIRD-LORE for Junior Classes.....	3,792 48	
Buttons for Junior Members.....	1,449 00	
Colored plates in BIRD-LORE.....	603 60	
Expressage on literature.....	494 87	
Field Agents' salaries and expenses.....	4,447 47	
Half-tones for publication.....	30 08	
Office rent.....	720 00	
Office supplies.....	577 32	
Miscellaneous.....	114 82	
Postage on circulars and literature.....	6,300 00	
Printed circulars to teachers.....	778 37	
Printing envelopes.....	455 46	
Printing leaflet units for Junior Members.....	23,958 06	
Reports and publicity.....	872 67	
Soliciting for Junior funds.....	257 43	
Stenographic and clerical work.....	5,791 89	
		<hr/> 55,147 52
Balance unexpended October 19, 1919 (Exhibit A).....		<hr/> \$5,137 40

DEPARTMENT OF APPLIED ORNITHOLOGY

INCOME AND EXPENSE ACCOUNT

Exhibit E

INCOME—

Balance unexpended October 19, 1918.....	\$131 50	
Contributions.....	1,235 00	
Earnings by H. K. Job from public lectures.....	559 00	
Royalty and rents from films.....	741 00	
Miscellaneous.....	27 00	
		<hr/> \$2,693 50

EXPENSES—

Agents' salaries and expenses.....	\$2,540 03	
Stationery and printing.....	76 38	
		<hr/> 2,616 41
Balance unexpended October 19, 1919 (Exhibit A).....		<hr/> \$77 09

LISTS OF MEMBERS OF AND CONTRIBUTORS TO THE NATIONAL ASSOCIATION OF AUDUBON SOCIETIES

BENEFACTOR

Albert Wilcox1906

FOUNDER

Mrs. Russell Sage1910

PATRONS

William P. Wharton1909
Miss Heloise Meyer1912
Anonymous1915
Gen. Coleman duPont1917

LIFE MEMBERS

Abbe, Dr. Robert.....	1919	Bassett, Mrs. Robert J.....	1918
Abbott, Clinton G.....	1910	Batcheller, Robert.....	1917
Abell, Mrs. Edwin F.....	1917	Bates, Mrs. Ella M.....	1914
Achelis, Miss Elizabeth.....	1919	Battelle, J. G.....	1917
Ackley, Miss Adeline E.....	1918	Battles, Miss C. Elizabeth.....	1918
Adams, Edward D.....	1916	Beebe, Mrs. J. Arthur.....	1907
Adams, Joseph.....	1918	Beech, Mrs. Herbert.....	1914
Adams, Thomas M.....	1916	Bell, Louis V.....	1917
Agassiz, G. R.....	1917	Bemis, Albert F.....	1918
Agnew, Miss Alice G.....	1916	Bennett, Mrs. Alice H.....	1914
Ahl, Mrs. Leonard.....	1915	Berwind, John L.....	1915
Ainsworth, Mrs. H. A.....	1918	Bigelow, Dr. Wm. Sturgis.....	1912
Aldred, J. E.....	1919	Bingham, Miss Harriet.....	1907
Allerton, Mrs. S. W.....	1917	Black, R. Clifford.....	1916
Alms, Mrs. Frederick H.....	1913	Blake, Mrs. Francis.....	1916
A— —, M. C. "From a Friend".....	1918	Blanchard, Miss Sarah H.....	1918
Ams, Charles M.....	1916	Blanding, Gordon.....	1917
Anderson, Frank Bartow.....	1917	Bliss, Mrs. Wm. H.....	1912
Andrews, J. Sherlock.....	1916	Bliss, Robert Woods.....	1915
Andrews, Mrs. E. B.....	1914	Blossom, D. S.....	1919
Armstrong, Dr. S. T.....	1913	Boardman, Miss Rosina C.....	1916
Arnold, Benjamin Walworth.....	1914	Boericke, Harold.....	1917
Arnold, Edward W. C.....	1916	Boettge, Robert.....	1916
Ash, Mrs. Charles G.....	1913	Bolling, Mrs. Raynal C.....	1909
Ashmun, Mrs. B. I.....	1918	Borden, Miss Emma L.....	1914
Auchmuty, Mrs. R. T.....	1913	Borden, Mrs. William.....	1917
Ault, L. A.....	1917	Bordon, John.....	1919
Austen, Mrs. Isabel Valle.....	1914	Bourn, W. B.....	1917
Ayres, Miss Mary A.....	1915	Bowdoin, Miss Edith G.....	1911
Babcock, Mrs. Perry H.....	1912	Bowles, H. L.....	1917
Bacon, Mrs. Robert.....	1912	Boyer, Joseph.....	1919
Bailey, Mrs. Charles.....	1918	Brackenridge, George W.....	1916
Baldwin, S. P.....	1918	Branch, Miss Effie K.....	1917
Ball, Miss Susan L.....	1918	Brewster, Frederick F.....	1916
Bancroft, Wilder D.....	1917	Bridge, Mrs. Lidian E.....	1907
Bancroft, Wm. P.....	1906	Brodhead, Charles Dingman.....	1919
Barbey, Henry G.....	1914	Brooker, Charles F.....	1917
Barr, James H.....	1916	Brooks, A. L.....	1906
Barr, Mrs. Cornelia Bassett.....	1917	Brooks, Miss Fanny.....	1913
Barrows, Ira.....	1917	Brooks, Gorham.....	1911
Bartlett, Miss Florence.....	1916	Brooks, Peter C.....	1911
Bartol, Mrs. J. W.....	1915	Brooks, Shepherd.....	1907

LIFE MEMBERS, continued

Brooks, Mrs. Shepherd.....	1906	Coolidge, T. Jefferson.....	1918
Brown, Mrs. Addison.....	1917	Coope, Mrs. Bertha.....	1919
Brown, Miss Annie H.....	1914	Cooper, Mrs. Theresa Bissinger.....	1918
Brown, T. Hassal.....	1913	Corrigan, James W.....	1917
Browning, J. Hall.....	1905	Cory, Daniel W.....	1919
Browning, Mrs. J. Hull.....	1918	Cotton, Miss Elizabeth A.....	1915
Brownson, Mrs. Willard H.....	1918	Covell, Dr. H. H.....	1916
Bruun, Charles A.....	1918	Cowl, Mrs. Clarkson.....	1916
Buhl, Arthur H.....	1917	Crabtree, Miss Lotta M.....	1912
Burk, Miss Antoinette Nagles.....	1919	Cranston, Miss Louise.....	1918
Burnham, William.....	1916	Crocker, C. T.....	1917
Burr, I. Tucker.....	1915	Crocker, Mrs. Emmons.....	1912
Burrall, Mrs. E. M.....	1918	Crosby, Maunsell S.....	1905
Bushnell, Mrs. Harriet L.....	1918	Cross, Mrs. R. J.....	1915
Butler, Mrs. Paul.....	1916	Crozier, Mrs. J. Lewis.....	1908
Butterworth, Frank S., Jr.....	1915	Cudworth, Mrs. F. B.....	1911
Butterworth, Mrs. William.....	1916	Curtis, Mrs. Anna Shaw.....	1917
Caesar, Harry I.....	1919	Curtis, Roy A.....	1917
Camden, J. N.....	1914	Cutting, Mrs. W. Bayard.....	1913
Camden, Mrs. J. N.....	1914	Cuyler, Miss Eleanor deGraff.....	1917
Campbell, John Boylston.....	1916	Dabney, F. L.....	1917
Carew, Mrs. Lucie B.....	1917	Dahlstrom, Mrs. C. A.....	1916
Carhartt, Hamilton.....	1916	Dane, Edward.....	1912
Carr, Gen'l Julian S.....	1907	Dane, Ernest Blaney.....	1913
Carry, Miss Kate.....	1916	Dane, Ernest Blaney, Jr.....	1912
Case, Miss Louise W.....	1914	Dane, Mrs. E. B.....	1913
Castleman, Mrs. Geo. A.....	1919	Daniell, J. T.....	1917
Cate, Mrs. Isaac M.....	1918	Davis, David D.....	1911
Chahoon, Mrs. George, Jr.....	1917	Davis, William T.....	1910
Chapin, Mrs. Charles A.....	1917	Davol, Miss Florence W.....	1916
Chapin, Chester W.....	1910	Day, Mrs. Frank A.....	1915
Chapman, Clarence E.....	1908	Dean, Charles A.....	1916
Chase, Mrs. Phillip A.....	1913	Deering Charles.....	1913
Chase, Miss Helen E.....	1918	Deering, James.....	1917
C——, E. S.....	1913	Denegre, William P.....	1919
Childs, Eversley.....	1916	Depew, Chauncey M., Jr.....	1915
Childs, John Lewis.....	1905	DeWolf, Wallace L.....	1917
Clark, George H.....	1916	Dick, Albert B.....	1917
Clark, Hopewell.....	1917	Dietz, Charles N.....	1917
Clark, Miss L. Elizabeth.....	1919	Dietz, Mrs. C. N.....	1918
Clarke, Mrs. W. N.....	1912	Dimock, Mrs. Henry F.....	1917
Clementson, Mrs. Sidney.....	1916	District of Columbia Audubon Soc.....	1915
Clow, William E.....	1917	Dobyne, Miss Margaret M.....	1917
Clyde, William P.....	1905	Dodge, Cleveland H.....	1916
Cobb, John B.....	1919	Doepke, Mrs. William F.....	1916
Cockcroft, Miss Elizabeth V.....	1917	Dommerich, Otto L.....	1917
Codman, Miss Catherine A.....	1918	Dows, Tracy.....	1914
Coe, Miss Ella S.....	1918	Draper, Mrs. Henry.....	1913
Coe, Thomas Upham.....	1917	Driver, E. Raymond.....	1919
Colburn, Miss Nancy E.....	1915	Drummond, Miss Mary.....	1915
Cole, Miss Ella M.....	1918	Ducharme, William H.....	1917
Colgate, Henry A.....	1917	Duer, Mrs. Denning.....	1915
Colgate, William.....	1917	Dunbar, F. L.....	1918
Collins, Mrs. Charles H.....	1918	DuPont, Alexis I.....	1917
Collins, Thomas H.....	1916	duPont, H. A.....	1917
Colt, Colonel Samuel P.....	1919	duPont, H. F.....	1919
Comstock, Miss Clara E.....	1914	duPont, P. S.....	1917
Comstock, Mrs. Robert H.....	1918	Earle, Carlos Y. Poitevent.....	1905
Converse, Mrs. Costello C.....	1915	Earle, Miss E. Poitevent.....	1905
Converse, E. C.....	1916	Eastman, George.....	1906
Coolidge, J. Randolph.....	1913	Eddison, Charles.....	1916
Coolidge, Oliver H.....	1912	Edgar, Daniel.....	1908
Coolidge, T. Jefferson, 3rd.....	1907	Elliot, Mrs. J. W.....	1912

LIFE MEMBERS, continued

Ellis, Ralph.....	1917	Gifford, James M.....	1917
Ellis, William D.....	1917	Gifford, Mrs. Robert L.....	1908
Ellsworth, Mrs. Henry M.....	1919	Gladling, Mrs. John Russell.....	1914
Ellsworth, James W.....	1915	Glassell, Andrew.....	1918
Elser, Albert C.....	1918	Glazier, Henry S.....	1916
Emerson, Mrs. G. D.....	1918	Godfrey, Mrs. Abbie P.....	1917
Emery, Miss Georgia Hill.....	1918	Godfrey, Mrs. A. E.....	1919
Emmons, Mrs. R. W. 2nd.....	1908	Godfrey, Miss Adelaide E.....	1918
Endicott, H. B.....	1908	Goodwin, Walter L., Jr.....	1914
Erbe, Gustav.....	1917	Gordon, Mrs. Donald.....	1918
Ernst, Richard P.....	1919	Gordon, Mrs. Mackenzie.....	1919
Eustis, Mrs. Herbert H.....	1917	Gould, George H.....	1917
Everett, Edward H.....	1917	Grant, W. W.....	1910
Everett, Miss Dorothy B.....	1916	Grasselli, C. A.....	1917
Ewing, J. Hunter.....	1919	Gray, Miss Elizabeth F.....	1915
Falk, Herman W.....	1917	Graydon, Mrs. Clendeny.....	1913
Farley, Mrs. Alice H.....	1919	Greene, Stephen, 2nd.....	1917
Farrel, Mrs. Franklin.....	1913	Greenway, Mrs. James C.....	1912
Farwell, John V.....	1917	Gregory, Mrs. Clifford D.....	1919
Fauntleroy, Miss Juliet.....	1919	Grew, Mrs. H. S.....	1913
Faux, William J.....	1919	Gribbel, Mrs. John.....	1918
Fay, Dudley B.....	1913	Griswold, Mrs. Wm. E. S.....	1915
Fay, Mrs. Flora Ward.....	1905	Guggenheim, Hon. Simon.....	1917
Fay, S. Prescott.....	1919	Haehle, Reinhold.....	1912
Fenno, Mrs. L. Carteret.....	1913	Haggin, Mrs. J. B.....	1917
Ferry, Mrs. Abby Farwell.....	1919	Haggin, L. T.....	1917
Field, Cortlandt deP.....	1915	Hallett, Mrs. Emma F.....	1919
Field, Mrs. Marshall, Jr.....	1919	Hamilton, Miss Elizabeth S.....	1918
Fincke, Wm. Mann, Jr.....	1916	Hamilton, Mrs. H. R.....	1918
Flattery, Miss Anna L.....	1917	Hamlin, Mrs. Eva S.....	1916
Fleischmann, Julius.....	1913	Hammond, Edward P.....	1919
Flint, Mrs. Jessie S. P.....	1913	Hancock, Mrs. James Denton.....	1916
Follansbee, B. G.....	1917	Hanna, H. M., Jr.....	1917
Follin, M. D.....	1918	Hanna, Mrs. H. M., Jr.....	1916
Folsom, Miss M. G.....	1918	Hanna, Miss Mary.....	1917
Forbes, Mrs. William H.....	1914	Hansen, Miss Emilie L.....	1918
Forbush, Edward Howe.....	1910	Harbeck, Mrs. Emma Gray.....	1916
Ford, Mrs. Bruce.....	1917	Hardy, Mrs. Richard.....	1918
Ford, Henry.....	1919	Harkness, Mrs. Edward S.....	1919
Ford, James B.....	1913	Harrah, Mrs. Charles J.....	1913
Ford, Lee M.....	1919	Harral, Mrs. Ellen W.....	1914
Fortmann, Henry F.....	1918	Harriman, Mrs. J. Low.....	1918
Frackelton, Mrs. R. J.....	1917	Harrison, Alfred C.....	1914
Franklin, H. H.....	1919	Hasbrouck, H. C.....	1915
Freeman, Alden.....	1918	Haskell, J. Amory.....	1916
Freeman, C. H.....	1917	Havemeyer, Mrs. H. O., Jr.....	1907
Freeman, Mrs. James G.....	1915	Hawkins, Rush C.....	1913
Freer, A. E.....	1919	Hayes, Edmund.....	1917
French, Miss Caroline L. W.....	1911	Hecker, Frank J.....	1917
Frothingham, John W.....	1913	Hemenway, Augustus.....	1915
Frothingham, Mrs. L. A.....	1916	Hemenway, Mrs. Augustus.....	1905
Gallatin, F., Jr.....	1908	Henderson, John B.....	1919
Gammell, Mrs. R. I.....	1919	Henderson, William.....	1918
Gardner, Mrs. John Lowell.....	1917	Hentz, Leonard S.....	1914
Garneau, Joseph.....	1913	Hepburn, A. B.....	1919
Garnsey, LeRoy.....	1919	Higginson, Mrs. James J.....	1916
Garvan, Francis P.....	1917	Hill, Miss Clara A.....	1917
Garrett, Mrs. P. C.....	1918	Hill, Hugh.....	1915
Gavit, E. Palmer.....	1917	Hill, Mrs. James J.....	1917
Gazzam, Mrs. Antoinette E.....	1908	Hill, Mrs. Susie R.....	1917
Gelpcke, Miss A. C.....	1918	Hinckley, Mrs. M. V.....	1918
Gelpcke, Miss Marie.....	1918	Hitch, Mrs. Frederic Delano.....	1915
Gifford, Dr. Harold.....	1917	Hoe, Richard M.....	1917

LIFE MEMBERS, continued

Hoff, Mrs. Grace Whitney.....	1915	Loring, Miss Helen.....	1918
Hoffman, Samuel V.....	1907	Loring, Mrs. W. Caleb.....	1913
Hopewell, Frank.....	1911	Low, Miss Nathalie F.....	1916
Hornbrooke, Mrs. Frances B.....	1913	Loyd, Miss Sarah A. C.....	1914
Hostetter, D. Herbert.....	1907	McCann, Mrs. G. B.....	1919
Houghton, Miss Elizabeth G.....	1914	McClymonds, Mrs. A. R.....	1914
Howard, Miss Edith M.....	1915	McConnell, Mrs. Annie B.....	1908
Hubbard, Joshua C. Jr.....	1915	McCormick, Mrs. R. S.....	1917
Hubbard, Richard.....	1915	McCormick, Mrs. R. T.....	1918
Hubby, Miss Ella F.....	1918	McGraw, Mrs. Thomas S.....	1908
Hunnewell, Mrs. Arthur.....	1918	McGregor, R. C.....	1918
Hunnewell, H. S.....	1905	McKim, LeRoy.....	1918
Hunnewell, Walter.....	1915	McKinlock, George A.....	1919
Hunter, Anna F.....	1917	McLane, Guy R.....	1916
Huntington, Archer M.....	1905	McOwen, Frederick.....	1917
Huntington, Howard.....	1918	Mackey, Clarence H.....	1908
Huntington, H. E.....	1917	MacLean, Mrs. Charles F.....	1916
Hyde, Mrs. Clarence M.....	1917	Mallory, Mrs. Jane M.....	1914
Iselin, Mrs. C. Oliver.....	1918	Mallinckrodt, Edward.....	1919
Iselin, Columbus O'D.....	1917	Markle, John.....	1917
Jackson, Edwin S.....	1916	Marmon, Mrs. Elizabeth C.....	1916
Jackson, Mrs. James.....	1908	Marshall, Louis.....	1906
Jaffray, Robert.....	1917	Marshall, Thomas K.....	1915
James, Ellerton.....	1918	Martin, Mrs. Bradley.....	1918
Jamison, Margaret A.....	1914	Mason, Miss Ellen F.....	1913
Jarvie, James N.....	1919	Mason, Miss Fanny P.....	1912
Jenkins, Mrs. Jos. W.....	1916	Mason, Geo. Grant.....	1914
Jennings, Oliver G.....	1917	Massachusetts Audubon Society.....	1915
Jones, Jerome.....	1915	Mather, Miss Katherine L.....	1919
Jones, Mrs. Lawrence.....	1917	Mead, Mrs. Charles Marsh.....	1915
Jordan, Miss Jeanette A.....	1917	Mellon, Mr. & Mrs. E. P.....	1919
Joslyn, Mrs. George A.....	1916	Mellon, W. L.....	1919
Keen, Miss Florence.....	1916	Meloy, Andrew D.....	1910
Keith, Mrs. D. M.....	1916	Merrill, Miss Mary E.....	1917
Kennedy, Mrs. John S.....	1919	Merriam, A. Ware.....	1918
Kent, Sherman.....	1917	Merriman, Mrs. Daniel.....	1915
Kidder, Nathaniel T.....	1905	Mershon, Hon. W. B.....	1914
Kilmer, Willis Sharpe.....	1907	Meyer, Mrs. August R.....	1917
Kimball, Mrs. Arthur R.....	1918	Meyer, Charles F.....	1917
King, Miss Ellen.....	1915	Meyer, Miss Heloise.....	1910
Kingsbury, Miss Alice E.....	1916	Michalis, Mrs. Clarence G.....	1909
Kinney, Morris.....	1913	Miles, Mrs. Flora E.....	1916
Kirby, Fred M.....	1919	Miller, Charles Kingsbury.....	1917
Kittredge, Miss Sarah N.....	1914	Miller, Mrs. E. C. T.....	1916
Knapp, George O.....	1919	Milliken, Seth Minot, M.D.....	1919
Knight, Miss A. C.....	1913	Mishall, Miss Helen.....	1918
Kuithan, Emil F.....	1918	Mitchell, Mrs. John G.....	1916
Kuser, John Dryden.....	1911	Mitchell, Miss Mary.....	1916
Lancashire, Mrs. J. H.....	1918	Moore, Mrs. Alfred F.....	1919
Lane, Benjamin C.....	1909	Moore, Clarence B.....	1909
Lang, Albion E.....	1916	Moore, Wm. H.....	1916
Lansing, Mrs. G. Y.....	1916	Morehead, J. M.....	1919
Lauder, Miss E. S.....	1918	Morgan, Miss Caroline L.....	1917
Lawrence, Emben.....	1916	Morgan, Mrs. J. P., Jr.....	1918
Lawrence, Rosewell B.....	1916	Morison, Robert S.....	1916
Lawson, Victor F.....	1917	Morrill, Miss Amelia.....	1917
Lefferts, M. C.....	1914	Morris, Efighham B.....	1917
Levor, G.....	1919	Morse, Mrs. Joy C.....	1919
Liesching, Bernhard.....	1918	Morse, Mrs. Waldo G.....	1918
Lindsay, Miss Jean.....	1919	Morton, Miss Mary.....	1906
Lippitt, Mrs. C.....	1918	Mott, Mrs. John B.....	1918
Logan, Stuart.....	1917	Mudd, Dr. Harvey G.....	1917
Longyear, John M.....	1917	Mulliken, Alfred H.....	1917

LIFE MEMBERS, continued

Munson, Mrs. W. D.....	1918	Remsen, Miss Elizabeth.....	1916
Murphy, Franklin.....	1909	Renwick, Mrs. William W.....	1914
Neave, Miss Jane C.....	1916	Richardson, Mrs. Charles F.....	1918
Neely, James C.....	1919	Richardson, S. O., Jr.....	1917
Nevins, Mrs. Davis.....	1916	Riker, John J.....	1916
Nevins, Mrs. Harriette F.....	1919	Roberts, Miss Frances A.....	1914
Newberry, W. F.....	1916	Rockefeller, Mrs. Frank.....	1919
Newcomer, Waldo.....	1917	Rockefeller, Wm. G.....	1912
New Jersey Audubon Society.....	1913	Rockwood, Mrs. George I.....	1918
Newman, Mrs. R. A.....	1914	Rodewald, F. L.....	1916
Nichols, Mrs. William G.....	1915	Roebbing, Mrs. John A.....	1916
Norrie, Mrs. E. L. Breese.....	1918	Rogers, Chas. H.....	1912
North Carolina Audubon Society.....	1905	Rogers, Dudley P.....	1914
Noyes, Mrs. David A.....	1916	Rogers, Miss Ella A.....	1917
O'Brein, Mrs. Michael W.....	1917	Rogers, Miss Julia.....	1918
Oldberg, Mrs. Emma.....	1918	Ropes, Mrs. Mary G.....	1913
Olds, R. E.....	1917	Rosengarten, George D.....	1917
Oliver, Mrs. James B.....	1916	Ruf, Mrs. Frank A.....	1917
Osborn, Frederick.....	1917	Rumsey, Mrs. Charles C.....	1918
Osborn, Prof. Henry Fairfield.....	1917	Russell, Mrs. Emily L.....	1919
Osborn, Mrs. William C.....	1916	Russell, Mrs. Gurdon W.....	1914
Pagenstecher, Albrecht.....	1918	Russell, Mrs. Robert Shaw.....	1919
Paine, F. W.....	1917	Ryle, Arthur.....	1919
Palmer, Charles H.....	1919	Saltonstall, John L.....	1908
Parker, A. H.....	1908	Sanger, Mrs. C. R.....	1916
Parker, Mrs. Gordon.....	1918	Sarmiento, Mrs. F. J.....	1918
Parker, Edward L.....	1909	Satterlee, Mrs. Herbert L.....	1906
Parsons, Mrs. J. D., Jr.....	1918	Schroeder, Miss Lizzie H.....	1911
Parsons, Miss Mary W.....	1913	Schwarzenbach, Robert J. F.....	1919
Peabody, Geo. A.....	1914	Seabury, Miss Sarah E.....	1915
Pearson T. Gilbert.....	1905	Seaman, L. W.....	1912
Peck, Mrs. Walter L.....	1909	Sears, Mrs. Richard W.....	1919
Perkins, Miss Ellen G.....	1914	Sears, William R.....	1915
Perkins, Mrs. George C.....	1913	Seiberling, F. A.....	1919
Perkins, Mrs. Gilman H.....	1918	Seton, Ernest T.....	1916
Perkins, William H.....	1917	Severance, John L.....	1916
Peterson, Arthur.....	1916	Shapleigh, Alfred L.....	1919
Phelps, Mrs. J. W.....	1914	Sharpe, Miss Ellen D.....	1915
Phillips, Mrs. Eleanor H.....	1908	Shattuck, Mrs. F. C.....	1906
Phillips, John C.....	1905	Shead, Mrs. Lucia W.....	1918
Phillips, Mrs. John C.....	1905	Shepard, Mrs. Elizabeth D.....	1918
Phipps, Henry C.....	1919	Sherman, Miss Althea R.....	1909
Pickman, Mrs. Dudley L.....	1907	Short, William.....	1918
Pierrepoint, Anna J.....	1905	Sibley, Hiram W.....	1919
Pierrepoint, John J.....	1905	Silsbee, Thomas.....	1918
Pierrepoint, Mrs. R. Stuyvesant.....	1914	Simpson, Alexander, Jr.....	1917
Pitney, Robert Henry.....	1919	Slattery, John R.....	1916
Plant, Frederick, S.....	1919	Sloane, Henry T.....	1918
Poland, James P.....	1909	Smith, Miss Eunice Cole.....	1918
Pomeroy, Mrs. Nelson.....	1915	Smith, Francis Drexel.....	1918
Pope, Willard.....	1918	Smith, Frank A.....	1918
Porter, Mrs. A. B.....	1918	Smith, Mrs. Heber.....	1917
Powers, Thomas H.....	1918	Spaulding, S. S.....	1917
Pratt, Geo. D.....	1911	Speed, Mrs. J. B.....	1918
Prentice, Miss Clare.....	1919	Speed, William S.....	1917
Prentiss, F. F.....	1916	Sprague, Mrs. Isaac.....	1919
Prime, Miss Cornelia.....	1909	Sprague, Miss Laura.....	1919
Procter, Mrs. Wm. C.....	1918	Sprague, Shaw.....	1919
Quier, Mrs. Edwin A.....	1917	S——, J. A. "Iowa Friend".....	1916
Quincy, Mrs. H. P.....	1915	Stahl, Adolfo.....	1917
Rainsford, Dr. W. S.....	1913	Stambaugh, H. H.....	1917
Rathborne, Richard C.....	1916	Starkweather, Mrs. J. N.....	1918
Reed, Mrs. Wm. Howell.....	1905	Stetson, Francis Lynde.....	1916

LIFE MEMBERS, continued

Stewart, Mrs. Edith A.....	1913	Walker, Mrs. Cyrus.....	1917
Stillman, B. G.....	1916	Wallace, Mrs. Augusta H.....	1914
Stillman, Chauncey D.....	1916	Wallace, Col. Cranmore N.....	1917
Stone, Charles A.....	1917	Warburg, F. M.....	1917
Stone, Miss Ellen J.....	1914	Ward, Mrs. Aaron.....	1919
Strong, Charles Hamot.....	1917	Ward, Charles Willis.....	1916
Strong, Mrs. J. R.....	1918	Ward, Marcus L.....	1908
Stuart, F. A.....	1916	Warner, Lucien C.....	1917
Sturgis, Mrs. F. K.....	1917	Warren, George H.....	1917
Swift, Charles H.....	1917	Warren, Mrs. E. Walpole.....	1918
Swift, Louis F.....	1917	Watson, Mrs. J. Henry.....	1916
Taft, Elihu B.....	1911	Watson, Mrs. James S.....	1911
Talbott, H. E.....	1917	Watson, Mrs. Thomas J.....	1916
Talcott, George S.....	1917	Watt, Mrs. Henry C.....	1918
Taylor, Charles H., Jr.....	1908	Webb, J. Griswold.....	1913
Taylor, Fred M.....	1919	Webster, F. G.....	1905
Thaw, J. C.....	1916	Webster, Mrs. Sidney.....	1913
Thayer, Mrs. Edward D.....	1917	Weeks, Henry De Forest.....	1909
Thayer, John E.....	1909	Weeks, Hon. John W.....	1917
Thompson, Mrs. Frederick F.....	1908	Weld, Miss Elizabeth F.....	1916
Tingley, S. H.....	1914	Wells, Mrs. Frederick L.....	1911
Tolman, E. E.....	1919	Welsh, Francis Ralston.....	1917
"A Life Member".....	1913	Westcott, Miss Margery D.....	1912
Tracy, Mrs. Jane A.....	1919	Wetherill, S. P.....	1917
Troesch, A. F.....	1917	Wetmore, George Peabody.....	1914
Tucker, Carl.....	1917	Wharton, William P.....	1907
Tuckerman, Alfred.....	1915	White, Windsor T.....	1916
Tufts, Leonard.....	1907	Whitfield, Miss Estelle.....	1917
Tuttle, Arthur J.....	1917	Whiting, Miss Gertrude.....	1918
Turner, Mrs. George M.....	1917	Whitman, William.....	1917
Turner, Mrs. William J.....	1917	Willets, Howard.....	1919
Tyson, Mrs. Geo.....	1915	Williams, Blair S.....	1919
Underwood, H. O.....	1916	Williams, Mrs. C. Duane.....	1918
Upham, Frederic W.....	1917	Williams, John D.....	1909
Upmann, Albert.....	1917	Wilson, M. Orme.....	1917
Upton, Mrs. Henry S.....	1916	Winchester Repeating Arms Co.....	1918
Van Brunt, Mrs. Charles.....	1912	Wiman, Dwight Deere.....	1917
Vanderbilt, Mrs. French.....	1914	Wister, John C.....	1917
Van Name, Willard G.....	1905	Wood, Mrs. Antoinette Eno.....	1913
Van Norden, Warner M.....	1917	Wood, Walter.....	1917
Vaux, George, Jr.....	1905	Wood, Wm. M.....	1919
Vaux, Miss Meta.....	1917	Woodman, Miss Mary.....	1914
Velie, Charles D.....	1918	Woodward, Mrs. Geo.....	1908
Vietor, Ernest G.....	1919	Woolman, Edward.....	1916
Voss, Miss Alice McKim.....	1917	Work, Mrs. A.....	1917
Wadsworth, Clarence S.....	1911	Wyman, Mrs. Alfred E.....	1914
Walker, Miss Alice L.....	1918	Zabriskie, Mrs. Cornelius.....	1917

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Abbott, Mrs. Frank E.....	5 00	Adams, C. Q.....	10 00	"Admirer of Wild	
Abbott, Mrs. F. V.....	5 00	Adams, Donald.....	5 00	Birds".....	2 00
Abbott, Mrs. G. St. L.....	5 00	Adams, Miss E. B.....	5 00	Adt. Albert A.....	2 00
Abbott, Henry W.....	5 00	Adams, Miss E. L.....	5 00	Agassiz, Rudolph L...	5 00
Abbott, Holker.....	1 00	Adams, H. W.....	5 00	Agnew, Donald.....	5 00
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Akin, Thomas.....	5 00	Anheuser, F. S.....	5 00	Audubon Society of	
Albrecht, Henry C.....	5 00	Anonymous.....	8 00	Sewickley Valley.....	10 00
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Aldred, Mrs. Wm. E.....	5 00	Anthony, Miss E. J.....	5 00	Skaneateles.....	5 00
Aldrich, Frank W.....	5 00	App, Miss Orpha L.....	10 00	Audubon Society of	
Aldrich, Miss G. M.....	1 00	Appleby, Mrs. J. S.....	5 00	Western Pennsyl-	
Aldrich, Spencer.....	5 00	Appleton, Miss M. E.....	5 00	vania.....	5 00
Aldridge, George W.....	5 00	Appleton, William S.....	5 00	Auerbach, Joseph S.....	5 00
Alexander, George.....	2 00	Archbald, Joseph A.....	5 00	Augustus, A. A.....	5 00
Alexander, Wm. H.....	5 00	Archer, Mrs. G. A.....	5 00	Austin, Francis B.....	5 00
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Alexandre, Mrs. J. J.....	5 00	Arizona Audubon		Averill, Glenn M.....	10 00
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Allee, Miss D. D.....	5 00	Armitage, Lucius.....	5 00	Avery, Samuel P.....	10 00
Allee, Miss Jean H.....	5 00	Armour, Allison V.....	5 00	Avis, Edward.....	5 00
Allen, Atkinson.....	5 00	Armstrong, Edward E.....	5 00	Ayer, C. F.....	5 00
Allen, Miss Catherine.....	10 00	Armstrong, Henry I.....	5 00	Ayres, Harry M.....	5 00
Allen, Clarence J.....	5 00	Armstrong, J. G.....	5 00	Babcock, Mrs. C. H.....	5 00
Allen, C. L.....	10 00	Arnold, Mrs. A. H.....	1 00	Babcock, K. C.....	5 00
Allen, Miss E. H.....	5 00	Arnold, Clarence M.....	10 00	Baber, Miss C.....	5 00
Allen, Edward K.....	5 00	Arnold, Mrs. G. C.....	5 00	Bachmann, N. H.....	5 00
Allen, Miss F. P.....	5 00	Arnold, Miss Mittie.....	5 00	Bachrach, Louis F.....	5 00
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Allen, Mrs. I. D.....	5 00	Arnold, W. J.....	5 00	Bacon, Miss E. S.....	5 00
Allen, Dr. J. A.....	5 00	Arnold, Mrs. Wm. R.....	2 00	Bacon, The Misses.....	2 00
Allen, John H.....	5 00	Arrison, Mrs. J. M.....	2 00	Bacon, Mrs. F. E.....	10 00
Allen, Miss L. E.....	1 00	Arthur, James B.....	5 00	Bacon, Miss M. P.....	5 00
Allen, Miss M. W.....	20 00	Asch, Mrs. Paul.....	5 00	Bacon, N. T.....	5 00
Allen, Miss Mateal.....	5 00	Ashley, Miss E. M.....	5 00	Badger, Arthur C.....	5 00
Allen, Dr. J. W.....	5 00	Ashley, J. S.....	5 00	Badger, Mrs. Horace	
Allender, Miss Irma.....	5 00	Aspinwall, C. A.....	5 00	D. (In Memoriam).....	10 00
Allis, Oswald T.....	5 00	Aspinwall, John.....	10 00	Badger, Mrs. W. L.....	5 00
Allison, Mrs. M. D.....	1 00	Astor, Vincent.....	5 00	Baetjen, Mrs. F. H.....	5 00
Alsop, Mrs. F. H.....	5 00	Atherton, Edward H.....	1 00	Bagley, George G.....	5 00
Alter, Mrs. Franklin.....	5 00	Atkins, Edwin F.....	5 00	Bailey, Mrs. A. T.....	5 00
Althouse, H. W.....	15 00	Atkins, Mrs. E. F.....	5 00	Bailey, Mrs. C. E.....	5 00
Alvord, George B.....	5 00	Atkinson, Mrs. E. W.....	5 00	Bailey, Mrs. F. M.....	5 00
Amerman, Rev. J. L.....	5 00	Atwater, Charles B.....	5 00	Bailey, Henry T.....	5 00
Ames, Mrs. Hobart.....	5 00	Atwater, James B.....	5 00	Baily, William L.....	2 00
Ames, Mrs. J. B.....	10 00	Atwood, Mrs. Eugene.....	5 00	Bain, Hugh A.....	5 00
Ames, John S.....	5 00	Auchincloss, Mrs. E.		Bainbridge, Mrs. M.	
Amory, John S.....	5 00	S.....	5 00	H.....	5 00
Anderson, Andrew.....	10 00	Auchincloss, Mrs. E.		Baird, Alvin U.....	5 00
Anderson, Mrs. B.....	5 00	S., Jr.....	5 00	Baird, Thomas E., Jr.....	5 00
Anderson, Mrs. John.....	10 00	Auchincloss, John W.....	5 00	Baird, Wyllys W.....	5 00
Anderson, J. C.....	5 00	Audubon Association		Baker, Benjamin H.....	5 00
Anderson, Mrs. J. C.....	5 00	of the Pacific.....	5 00	Baker, Miss C. S.....	5 00
Anderson, Miss K. L.....	5 00	Audubon Bird Club		Baker, Mrs. C. M.....	5 00
Anderson, Miss Sallie.....	5 00	of Erasmus Hall.....	5 00	Baker, Ezra H.....	5 00
Andre, Mrs. F. B.....	1 00	Audubon Bird Club		Baker, George L.....	5 00
Andrews, Mrs. H. E.....	5 00	of Indiana.....	5 00	Baker, Mrs. James A.....	5 00
Andrews, James C.....	5 00	Audubon Club of		Baker, Mrs. J. A.....	5 00
Andrews, J. H.....	5 00	Ardmore, Okla.....	5 00	Baker, John T.....	5 00
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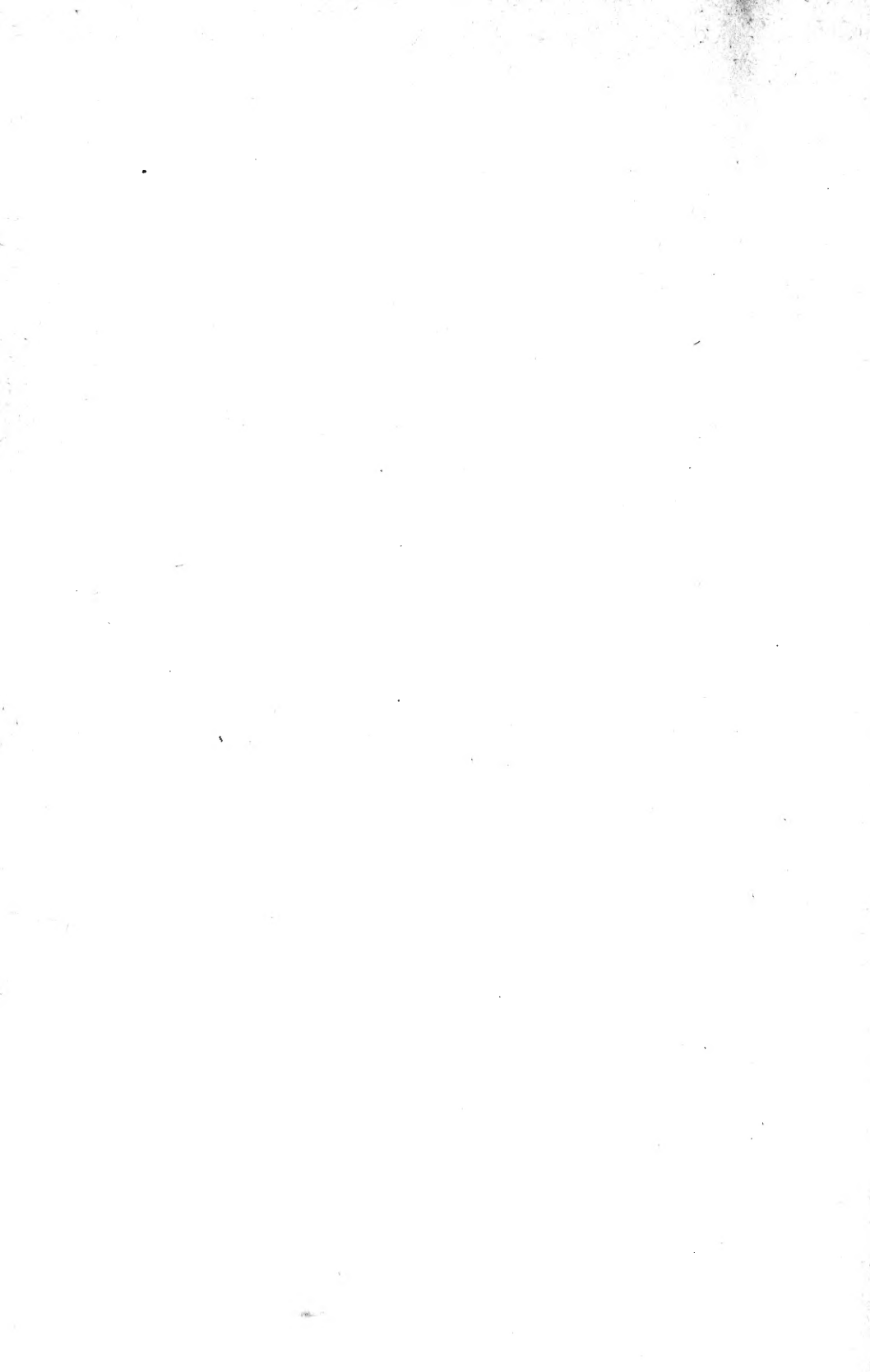
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